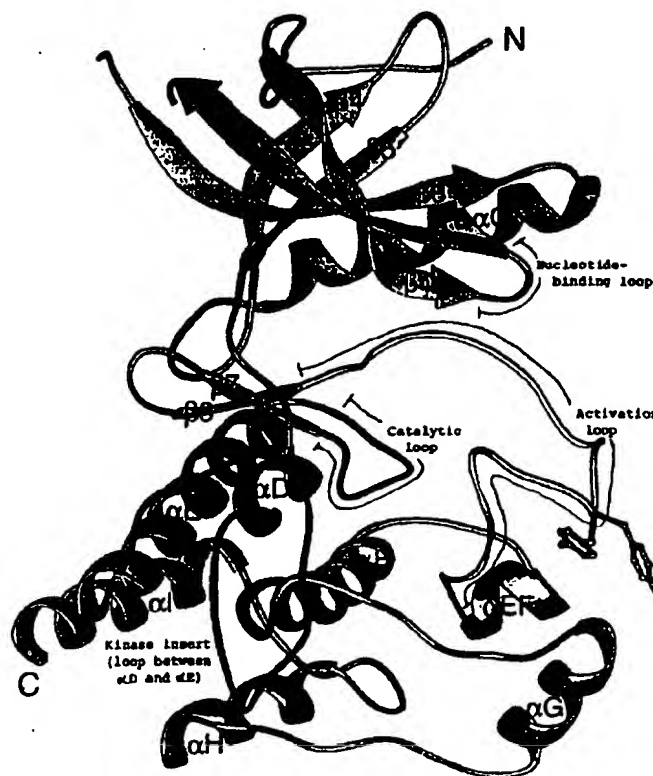


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(54) Title: CRYSTAL STRUCTURES OF A PROTEIN TYROSINE KINASE

## (57) Abstract

The present invention relates to the three-dimensional structures of a protein tyrosine kinase optionally complexed with one or more compounds. The atomic coordinates that define the structures of the protein tyrosine kinase and any of the compounds bound to it are pertinent to methods for determining the three-dimensional structures of protein tyrosine kinases with unknown structure and to methods that identify modulators of protein tyrosine kinase functions.



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DESCRIPTION

## CRYSTAL STRUCTURES OF A PROTEIN TYROSINE KINASE

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RELATED APPLICATIONS

This application is related to U.S. Application Serial No. 08/701,191, by Mohammadi, et al., entitled "Crystals of the Tyrosine Kinase Domain of Non-Insulin Receptor Tyrosine Kinases," filed August 21, 1996 (Lyon & Lyon Docket No. 227/088) and U.S. Application Serial No. 60/034,168, by McMahon, et al., entitled "Crystal Structures of a Protein Tyrosine Kinase Complexed with Compounds of the Oxindolinone/Thiolindolinone Family," filed December 19, 1996 (Lyon & Lyon Docket No. 221/282), which are hereby incorporated herein by reference in their entirety including any drawings, tables, and figures.

10  
15INTRODUCTION

The present invention relates to the three dimensional structures of protein kinases.

20

BACKGROUND OF THE INVENTION

The following description of the background of the invention is provided simply as an aid in understanding the invention and is not admitted to describe or constitute prior art to the invention.

25

Protein tyrosine kinases (PTKs) comprise a large and diverse class of enzymes (for a review, see Schlessinger and Ullrich, 1992, *Neuron* 9: 383-391). The PTK family contains multiple subfamilies, one of which

30

is the fibroblast growth factor receptor (FGF-R) subfamily (for a review, see Givol and Yayon, 1992, *FASEB J.* 6 (15): 3362-3369).

All PTKs enzymatically transfer a high energy phosphate from adenosine triphosphate to a tyrosine residue in a target protein. These phosphorylation events regulate cellular phenomena in signal transduction processes. Cellular signal transduction processes contain multiple steps that convert an extracellular signal into an intracellular signal. The intracellular signal is then converted into a cellular response. PTKs are components in many signal transduction processes. A PTK regulates the flow of a signal in a particular step in the process by phosphorylating a downstream molecule. The addition of a phosphate can either modulate the activity of the downstream molecule by turning it "on" or "off". Thus, aberrations in a particular PTK's activity can either cause overflow or underflow of the signal. Overflow of a signal can lead to such abnormalities as uncontrolled cell proliferation, which is representative of such disorders as cancer and angiogenesis.

Scientists in the biomedical community are searching for PTK inhibitors that down-regulate overflow signal transduction pathways. In particular, small molecule PTK inhibitors are sought that can traverse the cell membrane and not become hydrolyzed in acidic environments. These small molecule PTK inhibitors can be highly bioavailable and can be administered orally to patients.

Some small molecule PTK inhibitors have already

been discovered. For example, bis(monocyclic), bicyclic or heterocyclic aryl compounds (PCT WO 92/20642), vinylene-azaindole derivatives (PCT WO 94/14808), 1-cyclopropyl-4-pyridyl-quinolones (U.S. Patent No. 5,330,992), styryl compounds (U.S. Patent No. 5,217,999), styryl-substituted pyridyl compounds (U.S. Patent No. 5,302,606), certain quinazoline derivatives (EP Application No. 0 566 266 A1), seleoindoles and selenides (PCT WO 94/03427), tricyclic polyhydroxylic compounds (PCT WO 92/21660), and benzylphosphonic acid compounds (PCT WO 91/15495) are described as PTK inhibitors.

Although many PTK inhibitors are known, many of these are not specific for PTK subfamilies and will therefore cause multiple side-effects as therapeutics. Compounds of the indolinone family, however, are specific for the FGFR subfamily and are non-hydrolyzable. WO 96/40116, "Indolinone Compounds for the Treatment of Disease," published December 19, 1996, inventors Tang et al. Although the use of X-ray crystallography has provided three dimensional structures of other PTKs, they are not complexed with PTK subfamily specific, hydrolysis resistant, small molecules.

Despite recent advances, the need remains in the art for crystallographic analysis of protein kinases, so that improved therapeutic molecules can be designed and synthesized.

30

#### SUMMARY OF THE INVENTION

The present invention relates to the three

dimensional structures of protein tyrosine kinases. The use of X-ray crystallography can define the three dimensional structure of protein tyrosine kinase at atomic resolution.

5           The three dimensional structures described herein elucidate specific interactions between protein tyrosine kinases and compounds bound to them. The coordinates that define the three dimensional structures of protein tyrosine kinases are useful for determining three  
10 dimensional structures of PTKs with unknown structure. In addition, the coordinates are also useful for designing and identifying modulators of protein tyrosine kinase function. These modulators are potentially useful as therapeutics for diseases, including (but  
15 limited to) cell proliferative diseases, such as cancer, angiogenesis, atherosclerosis, and arthritis.

          Thus in a first aspect, the invention features a crystalline form of a polypeptide corresponding to the catalytic domain of a protein tyrosine kinase.

20           The term "crystalline form," in the context of the invention, is a crystal formed from an aqueous solution comprising a purified polypeptide corresponding to the catalytic domain of a PTK. A crystalline form of a protein tyrosine kinase is characterized as being  
25 capable of diffracting x-rays in a pattern defined by one of the crystal forms depicted in Blundel et al., 1976, Protein Crystallography, Academic Press. A crystalline form of a protein kinase is not  
30 characterized as being capable of diffracting x-rays in a pattern analogous to a crystalline form consisting of primarily salt or primarily a compound, for example.

The term "protein tyrosine kinase," or PTK, refers to an enzyme that transfers the high energy phosphate of adenosine triphosphate to a tyrosine residue located on a protein target.

5       A protein tyrosine kinase catalytic domain of the invention can originate from receptor protein tyrosine kinases that bind fibroblast growth factor (FGF). These protein tyrosine kinases are known as "FGFR" herein, and can relate to one member of the FGFR family, such as  
10      FGFR1.

      The term "catalytic domain" refers to the region of a protein that can exist as a separate entity from the protein. The catalytic domain of a protein tyrosine kinase is characterized as having considerable amino  
15      acid identity to the catalytic domain of other protein tyrosine kinases. Considerable amino acid identity preferably refers to at least 30% identity, more preferably at least 35% identity, and most preferably at least 40% identity. These degrees of amino acid  
20      identity refer to the identity between different protein tyrosine kinase families. Amino acid identity for members of a given protein tyrosine kinase family range from 55% to 90%. The catalytic domain may be functional as a separate entity. The catalytic domain of a protein  
25      tyrosine kinase is also characterized as a polypeptide that is soluble in solution.

      The term "identity" identity as used herein refers to a property of sequences that measures their similarity or relationship. Identity is measured by  
30      dividing the number of identical residues in the two sequences by the total number of residues and

multiplying the product by 100. Thus, two copies of exactly the same sequence have 100% identity, but sequences that are less highly conserved and have deletions, additions, or replacements have a lower  
5 degree of identity. Those skilled in the art will recognize that several computer programs are available for determining sequence identity.

The term "functional" refers to the ability of a catalytic domain to convert a substrate into a product  
10 by phosphorylating the substrate. The term "functional" also relates to the ability of a catalytic domain to bind natural binding partners. The catalytic region may comprise an N-terminal tail, a catalytic core, and a C-terminal tail. The catalytic core is a polypeptide  
15 that can be functional in terms of catalysis. N- and C-terminal tails are polypeptide regions that may not confer appreciable functionality in terms of catalysis, but may confer functionality in terms of modulator specificity.

20 A polypeptide can exist as a catalytic domain eventhough it is not functional. For example, a polypeptide corresponding to a catalytic domain may not be functional if it does not harbor phosphate moieties in key areas. Multiple examples of phosphorylation-  
25 state dependent function are well documented in the art. Therefore, a catalytic domain can also exist without being functional. A measure of a protein kinase catalytic domain is a polypeptide that is homologous to other protein kinase catalytic domains.

30 The term "polypeptide" refers to an amino acid chain representing a portion of, or the entire sequence

of, amino acids comprising a protein.

A preferred embodiment of the invention includes a crystalline form of a PTK that is a receptor PTK.

Receptors are proteins that straddle the inside and  
5 outside of the cell membrane. Receptor PTKs comprise an extracellular region, a transmembrane region, and an intracellular region comprising a catalytic domain.

Another preferred embodiment of the invention is the crystalline form of a receptor PTK selected from the  
10 group consisting of FGF-R, PDGF-R, FLK, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK.

Yet another preferred embodiment of the invention is the crystalline form of a PTK that is a non-receptor PTK. Non-receptor PTKs are located inside the cell and  
15 do not harbor extracellular or membrane-spanning polypeptides attached to the polypeptide corresponding to the catalytic domain. Non-receptor PTKs may harbor fatty acids or lipids, which can impart a membrane associated character to a PTK. In preferred embodiments  
20 of the invention, crystalline forms of non-receptor PTKs are selected from the group consisting of SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK.

In still another preferred embodiment, the invention features a crystalline form of a PTK that  
25 comprises a heavy metal atom. These types of crystals can be referred to as derivative crystals.

The term "derivative crystal" refers to a crystal where the polypeptide is in association with one or more heavy-metal atoms.

30 The term "association" refers to a condition of proximity between a chemical entity or compound, or

portions or fragments thereof, and tyrosine kinase domain protein, or portions or fragments thereof. The association may be non-covalent, i.e., where the juxtaposition is energetically favored by, e.g.,  
5 hydrogen-bonding, van der Waals, electrostatic or hydrophobic interactions, or it may be covalent.

The term "heavy metal atom" refers to an atom that is a transition element, a lanthanide metal, or an actinide metal. Lanthanide metals include elements with  
10 atomic numbers between 57 and 71, inclusive. Actinide metals include elements with atomic numbers between 89 and 103, inclusive.

In a preferred embodiment, the invention features a crystal of an FGF receptor tyrosine kinase domain  
15 protein. The FGF receptor tyrosine kinase domain protein can relate to FGFR1.

The term "FGFR1" refers to one member of multiple receptor PTKs that are homologous to one another and bind FGF. In this context, the term "homologous" refers  
20 to at least 70% amino acid identity between two members of the FGFR family.

The term "FGFR1" can also refer to a mutant of human FGFR1 which is characterized by the amino acid sequence of SEQ ID NO:2. As compared to human FGFR1,  
25 FGFR1 contains the following amino acid substitutions: Cys-488 → Ala, Cys-584 → Ser, Leu-457 → Val, and has an additional five amino acid residues at the N-terminus (Ser-Ala-Ala-Gly-Thr).

The term "human FGFR1" refers to the tyrosine  
30 kinase domain of human fibroblast growth factor receptor 1 ("FGFR1") having the amino acid sequence of SEQ ID



NO:1. Generally, human FGFR1 comprises a 310 amino acid residue fragment (residues 456 to 765) of human FGFR1.

The term "mutant" refers to a polypeptide which is obtained by replacing at least one amino acid residue in  
5 a native tyrosine kinase domain with a different amino acid residue. Mutation can be accomplished by adding and/or deleting amino acid residues within the native polypeptide or at the N- and/or C-terminus of a polypeptide corresponding to a native tyrosine kinase  
10 domain having substantially the same three-dimensional structure as the native tyrosine kinase domain from which it is derived. By having substantially the same three-dimensional structure is meant having a set of atomic structure coordinates that have a root mean  
15 square deviation (r.m.s.d.) of less than or equal to about 2 Å when superimposed with the atomic structure coordinates of the native tyrosine kinase domain from which the mutant is derived when at least about 50% to 100% of the C $\alpha$  atoms of the native tyrosine kinase are  
20 included in the superposition. A mutant may have, but need not have, PTK activity.

In another preferred embodiment, the invention relates to a crystalline form defined by the structural coordinates set forth in Table 1.

25 The term "atomic structural coordinates" as used herein refers to a data set that defines the three dimensional structure of a molecule or molecules. Structural coordinates can be slightly modified and still render nearly identical three dimensional  
30 structures. A measure of a unique set of structural coordinates is the root-mean-square deviation of the

resulting structure. Structural coordinates that render three dimensional structures that deviate from one another by a root-mean-square deviation of less than 1.5 Å may be viewed by a person of ordinary skill in the art as identical. Hence, the structural coordinates set forth in Table 1, Table 2, Table 3, and Table 4 are not limited to the values defined therein.

In other preferred embodiments, the invention features a crystalline form of the polypeptide in association with a compound. These types of crystalline forms can be referred to as co-crystals. The compound may be a cofactor, substrate, substrate analog, inhibitor, or allosteric effector.

The term "compound" refers to an organic molecule. The term "organic molecule" refers to a molecule which has at least one carbon atom in its structure. The compound can have a molecular weight of less than 6kDa. Both the geometry of the compound and the interactions formed between the compound and the polypeptide preferably govern high affinity binding between the two molecules. High affinity binding is preferably governed by a dissociation equilibrium constant on the order of  $10^{-6}$  M or less. The compound is preferably a modulator that alters the function of a PTK.

The term "function," in reference to the effect of a modulator on PTK function, refers to the ability of a modulator to enhance or inhibit the catalytic activity of a PTK.

The term "catalytic activity", in the context of the invention, defines the ability of a PTK to phosphorylate a substrate polypeptide. Catalytic

activity can be measured, for example, by determining the amount of a substrate converted to a product as a function of time. The conversion of the substrate to a product occurs at the active-site of the PTK.

5           The term "active-site" refers to a cavity located in the PTK in which one or more substrate molecules may bind. Addition of a modulator to cells expressing a PTK may enhance (activate) or lower (inhibit) the catalytic activity of the PTK.

10           A small number of inhibitors of PTK catalytic activity are known in the art. Small molecule inhibitors may modulate PTK function by blocking the binding of substrates. Indolinone compounds, for example, may bind to the active-site of PTK catalytic  
15 domains and inhibit them effectively, as measured by inhibition constants on the order of  $10^{-6}$  M or less.

          Activators of PTK intracellular regions can enhance PTK function by interacting with both the PTK catalytic domain and the substrate. Activators may also promote  
20 dimerization of PTKs and thus activate them by bringing them into close proximity with one another. In addition, activators may operate by promoting a conformational change in the intracellular region of the PTK such that the catalytic region modifies substrates  
25 at a faster rate in the presence of the activator.

          The term "function" can also refer to the ability of a modulator to enhance or inhibit the association between a PTK and a natural binding partner.

          The term "natural binding partner" refers to a  
30 polypeptide that normally binds to a PTK in a cell. These natural binding partners can play a role in

propagating a signal in a PTK signal transduction process. The natural binding partner can bind to a PTK with high affinity. High affinity represents an equilibrium binding constant on the order of  $10^{-6}$  M or less. However, a natural binding partner can also transiently interact with a PTK and chemically modify it. PTK natural binding partners are chosen from a group consisting of, but not limited to, src homology 2 (SH2) or 3 (SH3) domains, other phosphoryl tyrosine binding (PTB) domains, nucleotide exchange factors, and other protein kinases or protein phosphatases.

The term "interactions" refers to hydrophobic, aromatic, and ionic forces and hydrogen bonds formed between atoms in the modulator and the enzyme active-site.

The term "cofactor" refers to a compound that may, in addition to the substrate, bind to a protein and undergo a chemical reaction. Multiple co-factors are nucleotides or nucleotide derivatives, such as phosphate and nicotinamide derivatives of adenosine.

The term "substrate" refers to a compound that reacts with an enzyme. Enzymes can catalyze a specific reaction on a specific substrate. For example, PTKs can phosphorylate specific protein and peptide substrates on tyrosine moieties. In addition, nucleotides can act as substrates for protein kinases.

The term "substrate analog" refers to a compound that is structurally similar, but not identical, to a substrate. The substrate analog may be a nucleotide analog. Examples of nucleotide analogs are described below.

The term "inhibitor" refers to a compound that decreases the cellular function of a protein kinase. The protein kinase function is preferably the interaction with a natural binding partner and more preferably catalytic activity.

The term "allosteric effector" refers to a compound that causes allosteric interactions in a protein. The term "allosteric interactions" refers to interactions between separate sites on a protein. The sites can be different from the active site. The allosteric effector can enhance or inhibit catalytic activity by binding to a site that may be different than the active site.

The term "co-crystal" refers to a crystal where the polypeptide is in association with one or more compounds.

In preferred embodiments, a co-crystal of the invention can be in association with a heavy metal atom. Examples of heavy metal atoms are described above.

In other preferred embodiments, the invention features a co-crystal comprising the crystalline form of the polypeptide in association with a compound, where the compound is a non-hydrolyzable analog of ATP. These analogs can be referred to as nucleotide analogs.

The term "ATP" refers to the chemical compound adenosine triphosphate.

The term "non-hydrolyzable" refers to a compound having a covalent bond that does not readily react with water. Examples of non-hydrolyzable analogs of ATP are AMP-PNP and AMP-PCP, whose structures are well known to those skilled in the art.

The term "AMP-PNP" refers to adenylyl

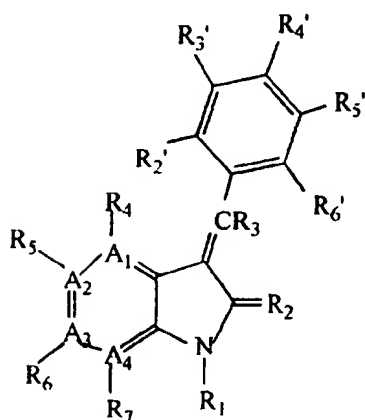
imidodiphosphate, a non-hydrolyzable analog of ATP.

The term "AMP-PCP" refers to adenylyl  
diphosphonate, a non-hydrolyzable analogue of ATP.

In another preferred embodiment, the invention  
5 relates to a crystalline form defined by the structural  
coordinates set forth in Table 2.

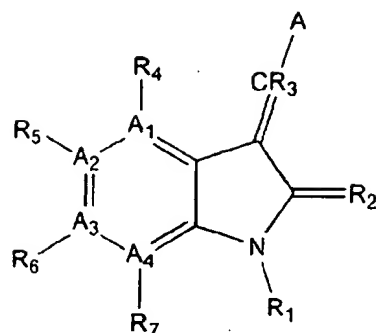
In preferred embodiments, the invention relates to  
crystalline forms, where the compound in association  
with the polypeptide is an indolinone.

10 Certain indolinones are specific modulators of PTK  
function. A preferred embodiment of the invention is  
the crystalline form of a PTK complexed with an  
indolinone of formula I or II:



15

(I)



(II)

or a pharmaceutically acceptable salt, isomer,

metabolite, ester, amide, or prodrug thereof, where:

(a) A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub>, and A<sub>4</sub> are independently carbon or  
5 nitrogen;

(b) R<sub>1</sub> is hydrogen or alkyl;

(c) R<sub>2</sub> is oxygen in the case of an oxindolinone or  
sulfur in the case of a thiolindolinone;

(d) R<sub>3</sub> is hydrogen;

10 (e) R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are optionally present, and  
are either (i) independently selected from the group  
consisting of alkyl, alkoxy, aryl, aryloxy, alkaryl,  
alkaryloxy, halogen, trihalomethyl, S(O)R, SO<sub>2</sub>NRR', SO<sub>3</sub>R,  
SR, NO<sub>2</sub>, NRR', OH, CN, C(O)R, OC(O)R, NHC(O)R, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R,  
15 and CONRR' or (ii) any two adjacent R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub>  
taken together form a fused ring with the aryl portion  
of the indole-based portion of the indolinone;

(f) R<sub>2</sub>', R<sub>3</sub>', R<sub>4</sub>', R<sub>5</sub>', and R<sub>6</sub>' are each  
independently selected from the group consisting of  
20 hydrogen, alkyl, alkoxy, aryl, aryloxy, alkaryl,  
alkaryloxy, halogen, trihalomethyl, S(O)R, SO<sub>2</sub>NRR', SO<sub>3</sub>R,  
SR, NO<sub>2</sub>, NRR', OH, CN, C(O)R, OC(O)R, NHC(O)R, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R,

and CONRR';

(g) n is 0, 1, 2, or 3;

(h) R is hydrogen, alkyl or aryl;

(i) R' is hydrogen, alkyl or aryl; and

5 (j) A is a five membered heteroaryl ring selected from the group consisting of thiophene, pyrrole, pyrazole, imidazole, 1,2,3-triazole, 1,2,4-triazole, oxazole, isoxazole, thiazole, isothiazole, furan, 1,2,3-oxadiazole, 1,2,4-oxadiazole, 1,2,5-oxadiazole, 1,3,4-oxadiazole, 1,2,3,4-oxatriazole, 1,2,3,5-oxatriazole, 10 1,2,3-thiadiazole, 1,2,4-thiadiazole, 1,2,5-thiadiazole, 1,3,4-thiadiazole, 1,2,3,4-thiatriazole, 1,2,3,5-thiatriazole, and tetrazole, optionally substituted at one or more positions with alkyl, alkoxy, aryl, aryloxy, 15 alkaryl, alkaryloxy, halogen, trihalomethyl, S(O)R, SO<sub>2</sub>NRR', SO<sub>3</sub>R, SR, NO<sub>2</sub>, NRR', OH, CN, C(O)R, OC(O)R, NHC(O)R, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R or CONRR'.

The term "pharmaceutically acceptable salt" refers to those salts which retain the biological activity and 20 properties of the free bases. Pharmaceutically acceptable salts can be obtained by reaction with inorganic acids such as hydrochloric acid, hydrobromic acid, sulfuric acid, nitric acid, phosphoric acid, methanesulfonic acid, ethanesulfonic acid, p- 25 toluenesulfonic acid, salicylic acid and the like.

The term "prodrug" refers to an agent that is converted into the parent drug *in vivo*. Prodrugs may be easier to administer than the parent drug in some situations. For example, the prodrug may be 30 bioavailable by oral administration but the parent is not, or the prodrug may improve solubility to allow for



intravenous administration.

"Alkyl" refers to a straight-chain, branched or cyclic saturated aliphatic hydrocarbon. Preferably, the alkyl group has 1 to 12 carbons. More preferably, it is a lower alkyl of from 1 to 7 carbons, more preferably 1 to 4 carbons. Typical alkyl groups include methyl, ethyl, propyl, isopropyl, butyl, isobutyl, tertiary butyl, pentyl, hexyl and the like. The alkyl group may be optionally substituted with one or more substituents are selected from the group consisting of hydroxyl, cyano, alkoxy, =O, =S, NO<sub>2</sub>, halogen, N(CH<sub>3</sub>)<sub>2</sub>, amino, and SH.

"Alkenyl" refers to a straight-chain, branched or cyclic unsaturated hydrocarbon group containing at least one carbon-carbon double bond. Preferably, the alkenyl group has 2 to 12 carbons. More preferably it is a lower alkenyl of from 2 to 7 carbons, more preferably 2 to 4 carbons. The alkenyl group may be optionally substituted with one or more substituents selected from the group consisting of hydroxyl, cyano, alkoxy, =O, =S, NO<sub>2</sub>, halogen, N(CH<sub>3</sub>)<sub>2</sub>, amino, and SH.

"Alkynyl" refers to a straight-chain, branched or cyclic unsaturated hydrocarbon containing at least one carbon-carbon triple bond. Preferably, the alkynyl group has 2 to 12 carbons. More preferably it is a lower alkynyl of from 2 to 7 carbons, more preferably 2 to 4 carbons. The alkynyl group may be optionally substituted with one or more substituents selected from the group consisting of hydroxyl, cyano, alkoxy, =O, =S, NO<sub>2</sub>, halogen, N(CH<sub>3</sub>)<sub>2</sub>, amino, and SH.

"Alkoxy" refers to an "O-alkyl" group.

"Aryl" refers to an aromatic group which has at least one ring having a conjugated pi-electron system and includes carbocyclic aryl, heterocyclic aryl and biaryl groups. The aryl group may be optionally substituted with one or more substituents selected from the group consisting of halogen, trihalomethyl, hydroxyl, SH, OH, NO<sub>2</sub>, amine, thioether, cyano, alkoxy, alkyl, and amino.

"Alkaryl" refers to an alkyl that is covalently joined to an aryl group. Preferably, the alkyl is a lower alkyl.

"Carbocyclic aryl" refers to an aryl group wherein the ring atoms are carbon.

"Heterocyclic aryl" refers to an aryl group having from 1 to 3 heteroatoms as ring atoms, the remainder of the ring atoms being carbon. Heteroatoms include oxygen, sulfur, and nitrogen. Thus, heterocyclic aryl groups include furanyl, thienyl, pyridyl, pyrrolyl, N-lower alkyl pyrrolo, pyrimidyl, pyrazinyl, imidazolyl and the like.

"Amide" refers to -C(O)-NH-R, where R is alkyl, aryl, alkylaryl or hydrogen.

"Thioamide" refers to -C(S)-NH-R, where R is alkyl, aryl, alkylaryl or hydrogen.

"Amine" refers to a -N(R')R'' group, where R' and R'' are independently selected from the group consisting of alkyl, aryl, and alkylaryl.

"Thioether" refers to -S-R, where R is alkyl, aryl, or alkylaryl.

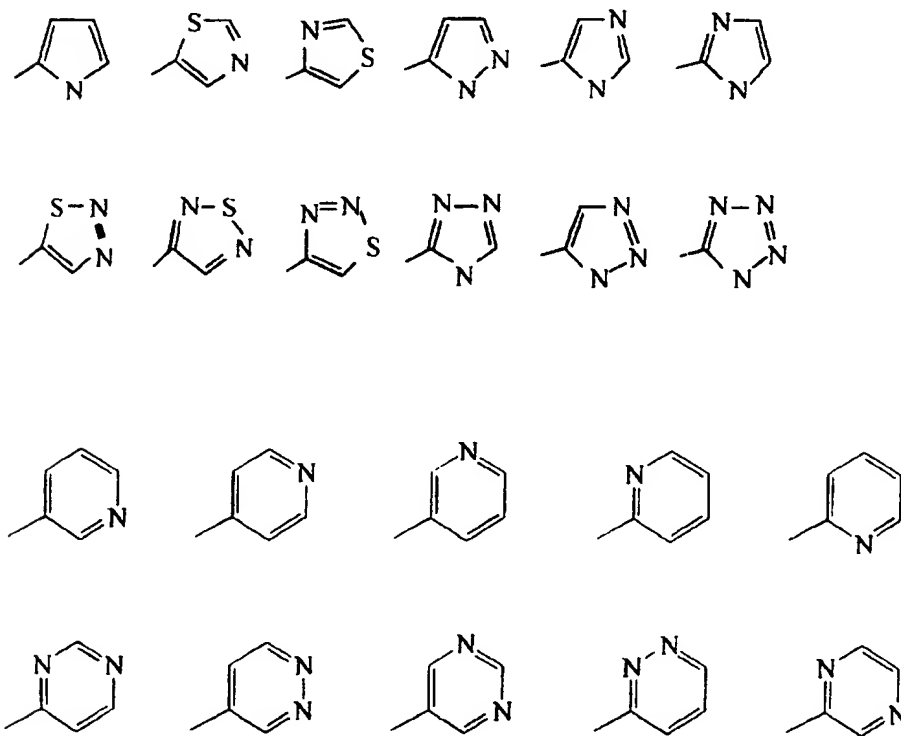
"Sulfonyl" refers to -S(O)<sub>2</sub>-R, where R is aryl, C(CN)=C-aryl, CH<sub>2</sub>CN, alkyaryl, sulfonamide, NH-alkyl, NH-

alkylaryl, or NH-aryl.

The term "acyl" denotes groups  $-C(O)R$ , where R is alkyl as defined above, such as formyl, acetyl, propionyl, or butyryl.

- 5 It is understood by those skilled in the art that when  $A_1$ ,  $A_2$ ,  $A_3$ , and  $A_4$  are nitrogen or sulfur that the corresponding  $R_4$ ,  $R_5$ ,  $R_6$ , and  $R_7$ , as well as the corresponding bond, do not exist.

10 Examples of indoles having such fused rings (as described in (e) (ii) above include the following:



- 15 The six membered rings shown above exemplify possible A rings in compound II.

Other preferred embodiments of the invention are crystalline forms comprising 3-[(3-(2-carboxyethyl)-4-methylpyrrol-5-yl)methylene]-2-indolinone as well as 3-[4-(4-formylpiperazine-1-yl-)benzylidenyl]-2-indolinone.

5 The polypeptide of these crystalline forms can be FGFR, and specifically, FGFR1.

In preferred embodiments, the crystalline forms of the invention can be defined by the structural coordinates set forth in Table 3 or Table 4.

10 The use of X-ray crystallography can elucidate the three dimensional structure of crystalline forms of the invention. The first characterization of crystalline forms by X-ray crystallography can determine the unit cell shape and its orientation in the crystal.

15 In other preferred embodiments, the invention features a crystal of an FGF receptor tyrosine kinase domain protein, where the crystal is characterized by having monoclinic unit cells. The crystal may also be characterized by having space group symmetry C2.

20 The term "unit cell" refers to the smallest and simplest volume element (i.e., parallelepiped-shaped block) of a crystal that is completely representative of the unit of pattern of the crystal. The dimensions of the unit cell are defined by six numbers: dimensions a, b and c and angles  $\alpha$ ,  $\beta$  and  $\gamma$ . A crystal can be viewed as an efficiently packed array of multiple unit cells. Detailed descriptions of crystallographic terms are described in, which is hereby incorporated herein by reference in its entirety, including any drawings, figures, and tables.

25

30

The term "monoclinic unit cell" refers to a unit

cell where  $a \neq b \neq c$ ;  $\alpha = \gamma = 90^\circ$ ; and  $\beta > 90^\circ$ .

The term "space group" refers to the symmetry of a unit cell. In a space group designation (e.g., C2) the capital letter indicates the lattice type and the other  
5 symbols represent symmetry operations that can be carried out on the unit cell without changing its appearance.

The term "lattice" in reference to crystal structures refers to the array of points defined by the  
10 vertices of packed unit cells.

The term "symmetry operations" refers to geometrically defined ways of exchanging equivalent parts of a unit cell, or exchanging equivalent molecules between two different unit cells. Examples of symmetry  
15 operations are screw axes, centers of inversion, and mirror planes.

In a preferred embodiment, the invention features a crystalline form, where the monoclinic unit cells have dimensions of about  $a=208.3 \text{ \AA}$ ,  $b=57.8 \text{ \AA}$ ,  $c=65.5 \text{ \AA}$  and  
20  $\beta=107.2^\circ$ .

In a preferred embodiment, the invention features a FGFR1 crystal, where the monoclinic unit cells have dimensions of about  $a=211.6 \text{ \AA}$ ,  $b=51.3 \text{ \AA}$ ,  $c=66.1 \text{ \AA}$  and  
 $\beta=107.7^\circ$ .

25 In another aspect the invention features a polypeptide corresponding to the catalytic domain of a protein tyrosine kinase, containing at least about 20 amino acid residues upstream of the first glycine in the conserved glycine-rich region of the catalytic domain,  
30 and at least about 17 amino acid residues downstream of the conserved arginine located at the C-terminal

boundary of the catalytic domain.

The polypeptides of the invention can be isolated, enriched or purified. In addition, the crystalline forms of the invention can be formed from polypeptides that are isolated, enriched, or purified.

By "isolated" in reference to a polypeptide is meant a polymer of 6, 12, 18 or more amino acids conjugated to each other, including polypeptides that are isolated from a natural source or that are synthesized. The isolated polypeptides of the present invention are unique in the sense that they are not found in a pure or separated state in nature. Use of the term "isolated" indicates that a naturally occurring sequence has been removed from its normal cellular environment. Thus, the sequence may be in a cell-free solution or placed in a different cellular environment. The term does not imply that the sequence is the only amino acid chain present, but that it is essentially free (about 90 - 95% pure at least) of material naturally associated with it.

By the use of the term "enriched" in reference to a polypeptide it is meant that the specific amino acid sequence constitutes a significantly higher fraction (2 - 5 fold) of the total of amino acids present in the cells or solution of interest than in normal or diseased cells or in the cells from which the sequence was taken. This could be caused by a person by preferential reduction in the amount of other amino acids present, or by a preferential increase in the amount of the specific amino acid sequence of interest, or by a combination of the two. However, it should be noted that "enriched"

does not imply that there are no other amino acid sequences present, just that the relative amount of the sequence of interest has been significantly increased. The term significant here is used to indicate that the level of increase is useful to the person making such an increase, and generally means an increase relative to other amino acids of about at least 2 fold, more preferably at least 5 to 10 fold or even more. The term also does not imply that there are no amino acids from other sources. The other source amino acids may, for example, comprise amino acids encoded by a yeast or bacterial genome, or a cloning vector such as pUC19. The term is meant to cover only those situations in which a person has intervened to elevate the proportion of the desired nucleic acid.

It is also advantageous for some purposes that an amino acid sequence be in purified form. The term "purified" in reference to a polypeptide does not require absolute purity (such as a homogeneous preparation); instead, it represents an indication that the sequence is relatively purer than in the natural environment (compared to the natural level this level should be at least 2-5 fold greater, e.g., in terms of mg/ml). Purification of at least one order of magnitude, preferably two or three orders, and more preferably four or five orders of magnitude is expressly contemplated. The substance is preferably free of contamination at a functionally significant level, for example 90%, 95%, or 99% pure.

In a preferred embodiment, the invention features a polypeptide corresponding to the catalytic domain of a

receptor PTK. The receptor PTK may have a three-dimensional structure substantially similar to that of the insulin receptor, even though the amino acid content may be different.

5 In a preferred embodiment, the invention features a polypeptide corresponding to the catalytic domain of a non-receptor PTK, where the non-insulin receptor tyrosine kinase is a cytoplasmic tyrosine kinase.

10 In a preferred embodiment, the invention features a polypeptide corresponding to the catalytic domain of a receptor PTK, selected from the group consisting of FGF-R, PDGF-R, KDR, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, or MUSK.

15 In a preferred embodiment, the invention features a polypeptide corresponding to the catalytic domain of a non-receptor PTK, selected from the group consisting of SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, or ACK.

20 In a preferred embodiment, the invention features a polypeptide corresponding to the catalytic domain of a PTK, having the amino acid sequence shown in Table 1 or Table 2.

25 In another aspect, the invention features a method for creating crystalline forms described herein. The method may utilize the polypeptides described herein to form a crystal. The method comprises the steps of:

(a) mixing a volume of polypeptide solution with a reservoir solution; and

(b) incubating the mixture obtained in step (a) over the reservoir solution in a closed container, under conditions suitable for crystallization.

30

These processes are described in detail in the



section entitled "Detailed Description of the Invention."

In another aspect, the invention features a method of obtaining FGF receptor tyrosine kinase domain polypeptide in crystalline form, comprising the steps of: (a) mixing a volume of polypeptide solution with an equal volume of reservoir solution, where the polypeptide solution comprises 1 mg/mL to 60 mg/mL FGF-type tyrosine kinase domain protein, 10 mM to 200 mM buffering agent, 0 mM to 20 mM dithiothreitol and has a pH of about 5.5 to about 7.5, and where the reservoir solution comprises 10% to 30% (w/v) polyethylene glycol, 0.1 M to 0.5 M ammonium sulfate, 0% to 20% (w/v) ethylene glycol or glycerol, 10 mM to 200 mM buffering agent and has a pH of about 5.5 to about 7.5; and (b) incubating the mixture obtained in step (a) over said reservoir solution in a closed container at a temperature between 0° and 25°C until crystals form.

In a preferred embodiment, the invention features a method of obtaining FGF receptor tyrosine kinase domain polypeptide in crystalline form, where the polypeptide solution comprises about 10 mg/mL FGF receptor tyrosine kinase domain, about 10 mM sodium chloride, about 2 mM dithiothreitol, about 10 mM Tris-HCl and has a pH of about 8; the reservoir buffer comprises about 16% (w/v) polyethylene glycol (MW 10000), about 0.3 M ammonium sulfate, about 5% ethylene glycol or glycerol, about 100 mM bis-Tris and has a pH of about 6.5; and the temperature is about 4°C.

In another preferred embodiment, the invention features a method of obtaining FGF receptor tyrosine

kinase domain polypeptide in crystalline form, where the polypeptide solution includes a compound such as a cofactor, substrate, substrate analog, inhibitor or allosteric effector.

5           In still another preferred embodiment, the invention features a method of obtaining FGF receptor tyrosine kinase domain polypeptide in crystalline form, where the compound is a nucleotide analog, such as a non-hydrolyzable analog of ATP, or an indolinone.

10          Indolinone compounds have the general structural formula as described herein.

          In another aspect, the invention features a cDNA encoding an FGF receptor tyrosine kinase domain protein, where a coding strand of the cDNA has the nucleotide  
15          sequence of SEQ ID NO:5.

          Another aspect of the invention relates to a method of determining three dimensional structures of PTKs with unknown structure by utilizing the structural coordinates of Table 1, Table 2, Table 3, and Table 4.  
20          These methods can relate to homology modeling, molecular replacement, and nuclear magnetic resonance methods.

          In a preferred embodiment, the invention relates to a method of determining three dimensional structures of PTKs with unknown structures by utilizing the  
25          coordinates of Table 1, Table 2, Table 3, or Table 4 in conjunction with the amino acid sequences of PTKs. This method of homology modeling comprises the steps of: (a) aligning the computer representation of an amino acid sequence of a PTK with unknown structure with that of a  
30          PTK with known structure, where alignment is achieved by matching homologous regions of the amino acid sequences;

(b) transferring the computer representation of an amino acid structure in the PTK sequence of known structure to a computer representation of a structure of the corresponding amino acid in the PTK sequence with  
5 unknown structure; and (c) determining low energy conformations of the resulting PTK structure.

The term "amino acid sequence" describes the order of amino acids in the amino acid chain comprising a polypeptide corresponding to the catalytic domain of a  
10 PTK.

The term "aligning" describes matching the beginning and the end of two or more amino acid sequences. Homologous amino acid sequences are placed on top of one another during the alignment process.

15 The term "homologous" describes amino acids in two sequences that are identical or have similar side-chain chemical groups (e.g., aliphatic, aromatic, polar, negatively charged, or positively charged).

The term "corresponding" refers to an amino acid  
20 that is aligned with another in the sequence alignment mentioned above.

The term "determining the low energy conformation" describes a process of changing the conformation of the PTK structure such that the structure is of low free  
25 energy. The PTK structure may or may not have molecules, such as modulators bound to it.

The term "low free energy" describes a state where the molecules are in a stable state as measured by the process. A stable state is achieved when favorable  
30 interactions are formed within the complex.

The term "favorable interactions" refers to

hydrophobic, aromatic, and ionic forces, and hydrogen bonds.

Another preferred embodiment of the invention relates to a method of determining three dimensional structures of PTKs with unknown structure. This method is accomplished by applying the structural coordinates of Table 1, Table 2, Table 3, or Table 4 to an incomplete X-ray crystallographic data set for a PTK. The method comprises the steps of: (a) aligning the positions of atoms in the unit cell by matching electron diffraction data from two crystals, where one data set is complete and the other is incomplete; and (b) determining a low energy conformation of the resulting PTK structure.

The term "incomplete data set" relates to a X-ray crystallographic data set that does not have enough information to give rise to a three dimensional structure.

In another preferred embodiment, the invention relates to a method of determining three dimensional structures of PTKs with unknown structure by applying the structural coordinates of Table 1, Table 2, Table 3, or Table 4 to nuclear magnetic resonance (NMR) data of a PTK. This method comprises the steps of: (a) determining the secondary structure of a PTK structure using NMR data; and (b) simplifying the assignment of through-space interactions of amino acids. The PTK structure may not be complexed with compounds or modulators.

The term "secondary structure" describes the arrangement of amino acids in a three dimensional

structure, such as in  $\alpha$ -helix or  $\beta$ -sheet elements.

The term "through-space interactions" defines the orientation of the secondary structural elements in the three dimensional structure and the distances between amino acids from different portions of the amino acid sequence.

The term "assignment" defines a method of analyzing NMR data and identifying which amino acids give rise to signals in the NMR spectrum.

In another aspect, the invention features a method of identifying potential modulators of PTK function. These modulators are identified by docking a computer representation of a structure of a compound with a computer representation of a cavity formed by the active-site of a PTK. The computer representation of the PTK active-site structure can be defined by structural coordinates.

The term "chemical group" refers to moieties that can form hydrogen bonds, hydrophobic, aromatic, or ionic interactions.

The term "docking" refers to a process of placing a compound in close proximity with a PTK. The term can also refer to a process of finding low energy conformations of the compound/PTK complex.

A preferred embodiment of the invention is a method of identifying potential modulators of PTK function. The method involves utilizing the structural coordinates or a PTK three dimensional structure. The structural coordinates set forth in Table 1, Table 2, Table 3, and Table 4 can be utilized. The method comprises the steps of: (a) removing a computer representation of a PTK

structure and docking a computer representation of a compound from a computer data base with a computer representation of the active-site of the PTK; (b) determining a conformation of the complex with a favorable geometric fit and favorable complementary interactions; and (c) identifying compounds that best fit the PTK active-site as potential modulators of PTK function. The initial PTK structure may or may not have compounds bound to it.

10       The term "favorable geometric fit" refers to a conformation of the compound-PTK complex where the surface area of the compound is in close proximity with the surface area of the active-site without forming unfavorable interactions. Unfavorable interactions can be steric hindrances between atoms in the compound and atoms in the PTK active-site.

15       The term "favorable complementary interactions" relates to hydrophobic, aromatic, ionic, and hydrogen bond donating, and hydrogen bond accepting forces formed between the compound and the PTK active-site.

20       The term "potential" qualifies the term "modulator of PTK function" because the potential modulator or PTK function has not yet been tested for activity *in vitro* or *in vivo*.

25       The term "best fit" describes compounds that complexed the most surface area in the complex and/or form the most favorable complementary interactions with the PTK in the screen in a given experiment.

30       Another preferred embodiment of the invention is a method of identifying potential modulators of PTK function. The method involves utilizing a three

dimensional structure of a PTK, with or without compounds bound to it. The method comprises the steps of: (a) modifying a computer representation of a PTK having one or more compounds bound to it, where the  
5 computer representations of the compound or compounds and PTK are defined by structural coordinates; (b) determining a conformation of the complex with a favorable geometric fit and favorable complementary interactions; and (c) identifying the compounds that  
10 best fit the PTK active-site as potential modulators of PTK function.

The term "modifying" relates to deleting a chemical group or groups or adding a chemical group or groups. Computer representations of the chemical groups can be  
15 selected from a computer data base.

Yet another preferred embodiment of the invention is a method of identifying potential modulators of PTK function by operating modulator construction or modulator searching computer programs on the compounds  
20 complexed with the PTK. The method comprises the steps of: (a) removing a computer representation of one or more compounds complexed with a PTK; and (b) searching a data base for compounds similar to the removed compounds using a compound searching computer program, or  
25 replacing portions of the compounds complexed with the PTK with similar chemical structures from a data base using a compound construction computer program, where the representations of the compounds are defined by structural coordinates.

30 The term "operating" as used herein refers to utilizing the three-dimensional conformation of

molecules defined by the processes described herein in various computer programs.

The term "similar compound" refers to a compound in a computer data base that has a similar geometric  
5 structure as compounds that can bind to a PTK. The similar compound can also have similar chemical groups as the compounds that are either bound to the PTK or once bound to the PTK. The similar chemical groups can form complementary interactions with the PTK.

10 The term "compound searching computer program" describes a computer program that searches computer representations of compounds from a computer data base that have similar three dimensional structures and similar chemical groups as a compound of interest. The  
15 compound of interest is preferably an indolinone compound.

The term "similar chemical structures" refers to chemical groups that share similar geometry as portions of the compounds in complex with the PTK or compounds  
20 removed from the PTK structure. Similar chemical structures can also refer to chemical groups that may form similar complementary interactions as portions of the compounds in complex with the PTK or compounds removed from the PTK structure.

25 The term "replacing structures" refers to removing a portion of the compounds in complex with the PTK or compounds removed from the PTK structure and connecting the broken bonds to a similar chemical structure.

The term "compound construction computer program"  
30 describes a computer program that replaces computer representations of chemical groups in a compound with



groups from a computer data base. The compound is preferably an indolinone compound.

The term "similar three dimensional structure" describes two molecules with nearly identical shape and  
5 volume.

In another preferred embodiment of the invention, the PTK structures used in the modulator design or identification method of the invention are defined by the structural coordinates of Table 1, Table 2, Table 3,  
10 or Table 4.

The methods for using the crystalline forms and three dimensional structures of the invention can relate to a broad range of protein kinases. Thus, in preferred embodiments, the invention relates to a receptor PTK.  
15 The receptor PTK can be selected from the group consisting of FGF-R, PDGF-R, FLK, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK. The PTK may also exist as a non-receptor PTK. The non-receptor PTK can be selected from the group consisting  
20 of SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK.

In another aspect, the invention features a potential modulator of PTK function identified by methods disclosed in the invention.

25 A preferred embodiment of the invention is that the potential modulator of PTK function is an oxindolinone or a thiolindolinone of formula I or II disclosed above.

Another aspect of the invention is a method for synthesizing a potential modulator of PTK function or  
30 its pharmaceutically acceptable salts, isomers, metabolites, esters, amides, or prodrugs by a standard

synthetic method known in the art. Synthetic procedures are discussed below.

In another aspect, the invention features a method of identifying a potential modulator of PTK function as a modulator of PTK function. The method comprises the steps of: (a) administering a potential modulator of PTK function to cells; (b) comparing the level of PTK phosphorylation between cells not administered the potential modulator and cells administered the potential modulator; and (c) identifying the potential modulator as a modulator of PTK function based on the difference in the level of PTK phosphorylation.

The term "cells" refers to any type of cells either primary or cultured. Primary cells can be extracted directly from an organism while cultured cells rapidly divide and can be cultured in many successive rounds. Cells can be grown in a variety of containers including, but not limited to flasks, dishes, and well plates.

The term "administer" refers to a method of delivering a compound to cells. The compound can be prepared using a carrier such as dimethyl sulfoxide (DMSO) in an aqueous solution. The aqueous solution comprising the compound, also termed an "aqueous preparation", can be simply mixed into the medium bathing the layer of cells or microinjected into the cells themselves. The compounds may be administered to the cells using a suitable buffered solution.

The term "suitable buffered solution" refers to an aqueous preparation of the compound that comprises a salt that can control the pH of the solution at low concentrations. Because the salt exists at low

concentrations, the salt preferably does not alter the function of the cells.

The term "PTK phosphorylation" refers to the presence of phosphate on the PTK. Phosphates on PTKs  
5 can be identified by antibodies that bind them specifically with high affinity.

In another aspect, the invention features a method of identifying a potential modulator of PTK function as a modulator of PTK function. The method comprises the  
10 steps of: (a) administering a potential modulator of PTK function to cells; (b) comparing the level of cell growth between cells not administered the potential modulator and cells administered the potential modulator; and (c) identifying the potential modulator  
15 as a modulator of PTK function based on the difference in cell growth.

The term "cell growth" refers to the rate at which a group of cells divides. Cell division rates can be readily measured by methods utilized by those skilled in  
20 the art.

Another aspect of the invention features a method of diagnosing a disease by identifying cells harboring a PTK with inappropriate activity. The method comprises the steps of: (a) administering a modulator of PTK  
25 function to cells; (b) comparing the rate of cell growth between cells not administered the modulator and cells administered the modulator; and (c) diagnosing a disease by characterizing cells harboring a PTK with inappropriate activity from the effect of the modulator  
30 on the difference in the rate of cell growth. The modulator can be identified by the methods of the

invention.

The term "inappropriate activity" refers to a PTK that regulates a step in a signal transduction process at a higher or lower rate than normal cells.

5 Aberrations in the rate of signal transduction can be caused by alterations in the stimulation of a receptor PTK by a growth factor, alterations in the activity of PTK-specific phosphatase, over-expression of a PTK in a cell, or mutations in the catalytic region of the PTK  
10 itself.

The term "signal transduction process" describes the steps in a cascade of events where an extracellular signal is transmitted into an intracellular signal.

The term "PTK-specific phosphatase" describes an  
15 enzyme that dephosphorylates a particular PTK and thereby regulates that PTK's activity.

Another aspect of the invention is a method of treating a disease associated with a PTK with inappropriate activity in a cellular organism, where the  
20 method comprises the steps of: (a) administering the modulator of PTK function to the organism, where the modulator is in an acceptable pharmaceutical preparation; and (b) activating or inhibiting the PTK function to treat the disease.

25 The term "organism" relates to any living being comprised of at least one cell. An organism can be as simple as one eukaryotic cell or as complex as a mammal.

The term "administering", in reference to an organism, refers to a method of introducing the compound  
30 to the organism. The compound can be administered when the cells or tissues of the organism exist within the

organism or outside of the organism. Cells existing outside the organism can be maintained or grown in cell culture dishes. For cells harbored within the organism, many techniques exist in the art to administer  
5 compounds, including (but not limited to) oral, parenteral, dermal, and injection applications. For cells outside of the patient, multiple techniques exist in the art to administer the compounds, including (but not limited to) cell microinjection techniques,  
10 transformation techniques, and carrier techniques.

The term "pharmaceutically acceptable composition" refers to a preparation comprising the modulator of PTK activity. The composition is acceptable if it does not appreciably cause irritations to the organism  
15 administered the compound.

Preferred embodiments of the of the invention are that the PTK is a receptor PTK selected from the group consisting of FGF-R, PDGF-R, FLK-1, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK.  
20 Other preferred embodiments of the invention are that the PTK is a non-receptor PTK selected from the group consisting of SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK.

The summary of the invention described above is  
25 non-limiting and other features and advantages of the invention will be apparent from the following detailed description, and from the claims.

#### BRIEF DESCRIPTION OF THE FIGURES

30 FIG. 1 provides a ribbon diagram of the structure of FGFR1 showing the side chains of tyrosines Tyr-653

and Tyr-654 and the  $\alpha$  helical ( $\alpha$ C,  $\alpha$ D,  $\alpha$ E,  $\alpha$ EF,  $\alpha$ F- $\alpha$ I),  
 $\beta$  strand ( $\beta$ 1- $\beta$ 5,  $\beta$ 7,  $\beta$ 8), nucleotide-binding loop,  
catalytic loop, activation loop and kinase insert  
regions of the molecule. The termini are denoted by N  
5 and C. The loop between  $\beta$ 2 and  $\beta$ 3 is disordered,  
indicated by a break in the chain in this region.

FIG. 2 provides a stereo view of a  $C_\alpha$  trace of FGFR1  
shown in the same orientation as FIG. 1, with every  
tenth amino acid residue marked with a filled circle and  
10 every twentieth amino acid residue labeled with a  
residue number.

FIG. 3 provides a structure-based sequence  
alignment of human fibroblast growth factor receptor 1  
(FGFR1), human fibroblast growth factor receptor 2  
15 (FGFR2), human fibroblast growth factor receptor 3  
(FGFR3), human fibroblast growth factor receptor 4  
(FGFR4), a *D. melanogaster* homolog (DFGFR1), a *C. elegans*  
homolog (EGL-15) and insulin receptor tyrosine  
kinase (IRK).

20 FIGS. 4A and 4B provide ribbon diagrams of the  
N-terminal lobes (4A) and C-terminal lobes (4B) of FGFR1  
and IRK in which the  $C_\alpha$  atoms of the  $\beta$  sheets (4A) or  $\alpha$ -  
helices (4B) of the two proteins have been superimposed.

FIG. 5 illustrates the side-chain positions of the  
25 tyrosine autophosphorylation sites of FGFR1 on the  
backbone representation of FGFR1.

FIGS. 6A and 6B are amino acid sequence alignments  
of the catalytic domains of PTKs, including receptor and  
non-receptor type PTKs. FIG. 6A depicts one  
30 representative member from each of the eighteen  
subfamilies of receptor tyrosine kinases. FIG. 6B

depicts one representative member from each of the subfamilies of cytoplasmic tyrosine kinases. In FIGS. 6A and 6B highly conserved residues are boxed. The position of the glycine-rich domain, kinase insert, catalytic loop, and activation loop are indicated. The numbering is for human FGF-receptor.

BRIEF DESCRIPTION OF THE CRYSTALLOGRAPHIC ATOMIC  
STRUCTURAL COORDINATES

10       The crystallographic structural coordinates are located at the end of the section entitled "Examples" and before the claims. Three sets of coordinates can be found in the Protein Data Bank under accession names 1FGK, 1AGW, and 1FGI. The 1FGK coordinates correspond to those listed in Table 1, the 1AGW coordinates correspond to those listed in Table 4, and the 1FGI coordinates correspond to those listed in Table 3. The 1AGW and 1FGI coordinate sets will be publically available in March 1998.

20       Table 1 provides the atomic structure coordinates of native FGFR1 crystals of the invention as determined by X-ray crystallography; and

Table 2 provides the atomic structure coordinates of FGFR1:AMP-PCP co-crystals of the invention as determined by X-ray crystallography.

Table 3 lists crystallographic coordinates defining the three dimensional structure of FGF-R1 complexed with 3-[(3-(2-carboxyethyl)-4-methylpyrrol-5-yl)methylene]-2-indolinone. The columns (from left to right) are descriptions of the atoms by number and type, amino acid and number containing the atom, the x coordinate, y

coordinate, z coordinate, bond connectivity, and temperature factor. All of these parameters are well defined in the art.

Table 4 is a file of crystallographic coordinates defining the three dimensional structure of FGF-R1 complexed with 3-[4-(4-formylpiperazine-1-yl)benzylidenyl]-2-indolinone. The columns are as described in Table 3.

10                    DETAILED DESCRIPTION OF THE INVENTION

The present invention is directed to the design and identification of modulators of protein tyrosine kinase function that are PTK subfamily specific, non-hydrolyzable under acidic conditions, and highly bioavailable. The three dimensional structures of a PTK optionally complexed with compounds can facilitate design and identification of modulators of PTK function.

Protein tyrosine kinases (PTKs) comprise a large and diverse class of enzymes. Schlessinger and Ullrich, 1992, *Neuron* 9: 383-391. The PTK family is subdivided into members that are receptors and those that are non-receptors. The PTK receptor family contains multiple subfamilies, one of which is the fibroblast growth factor receptor (FGF-R) PTK which is a molecule implicated in regulating angiogenesis as well as cellular proliferation and differentiation. Givol and Yayon, 1992, *FASEB J.* 6 (15): 3362-3369.

FGF-R1 can mediate cellular functions by its role in one or more cellular signal transduction processes. Cellular signal transduction processes comprise multiple steps that convert an extracellular signal into an



intracellular signal.

Receptor PTK mediated signal transduction is initiated by binding a specific extracellular ligand, followed by receptor dimerization, and subsequent  
5 autophosphorylation of the receptor PTK. The phosphate groups are binding sites for intracellular signal transduction molecules which leads to the formation of protein complexes at the cell membrane. These complexes facilitate an appropriate cellular effect (e.g., cell  
10 division, metabolic effects to the extracellular microenvironment) in response to the ligand that began the cascade of events.

Receptor PTKs function as binding sites for several intracellular proteins. Intracellular PTK binding  
15 proteins are divided into two principal groups: (1) those which harbor a catalytic domain; and (2) those which lack such a domain but serve as adapters and associate with catalytically active molecules. Songyang et al., 1993, *Cell* 72:767-778. SH2 (src homology)  
20 domains are common adaptors found in proteins which directly bind to the receptor PTK. SH2 domains are harbored by PTK binding proteins of both groups mentioned above. Fantl et al., 1992, *Cell* 69:413-423; Songyang et al., 1994, *Mol. Cell. Biol.* 14:2777-2785);  
25 Songyang et al., 1993, *Cell* 72:767-778; and Koch et al., 1991, *Science* 252:668-678.

The specificity of the interactions between receptor PTKs and the SH2 domains of their binding proteins is determined by the amino acid residues  
30 immediately surrounding the phosphorylated tyrosine residue. Differences in the binding affinities of SH2

domains is correlated with the observed differences in substrate phosphorylation profiles of downstream molecules in the signal transduction process. Songyang et al., 1993, *Cell* 72:767-778. These observations suggest that the function of each receptor PTK is determined not only by its pattern of expression and ligand availability but also by the array of downstream signal transduction pathways that are activated by a particular receptor. Thus, PTKs provide a controlling regulatory role in signal transduction processes as a consequence of autophosphorylation.

PTK-mediated signal transduction regulates cell proliferative, differentiation, and metabolic responses in cells. Therefore, inappropriate PTK activity can result in a wide array of disorders and diseases. These disorders, which are described below, may be treated by the modulators of PTK function designed or identified by the methods disclosed herein.

The present invention also relates to crystalline polypeptides corresponding to the catalytic domain of receptor tyrosine kinases. Such tyrosine kinases include receptors of a class that are not covalently cross-linked but are understood to undergo ligand-induced dimerization, as well as cytoplasmic tyrosine kinases. Preferably, the crystalline catalytic domains are of sufficient quality to allow for the determination of a three-dimensional X-ray diffraction structure to a resolution of about 1.5 Å to about 2.5 Å. The invention also relates to methods for preparing and crystallizing the polypeptides. The polypeptides themselves, as well as information derived from their crystal structures can

be used to analyze and modify tyrosine kinase activity as well as to identify compounds that interact with the catalytic domain.

The polypeptides of the invention are designed on the basis of the structure of a region in the cytoplasmic domain of the receptor tyrosine kinase that contains the catalytic domain. By way of illustration, FIG. 6A shows the amino acid sequence alignment of the catalytic domains of eighteen human receptor tyrosine kinases; one representative member from each of the eighteen subfamilies is shown. FIG. 6B shows the alignment for cytoplasmic kinases. The applicants have discovered and determined the boundaries of the domain required for crystallization of the resulting polypeptide. Surprisingly, these boundaries differ from that required for catalytic activity. For example, referring to FIG. 6A, the domain required for catalytic activity is generally believed to span about 7 amino acid residues upstream of the first glycine (FIG. 6A residue number 485) of the N-terminal glycine-rich region through about 10 residues beyond the C-terminal conserved arginine (FIG. 6A, residue number 744). However, the additional sequence upstream of the N-terminal glycine-rich region and downstream of the C-terminal conserved arginine can be required for crystallization. In particular, at least about 20 amino acid residues (+/- 5 amino acid residues) upstream of the first glycine (i.e., FIG. 6A, residue number 485) in the conserved glycine-rich region of the catalytic domain, and at least about 17 amino acid residues (+/- 5 amino acid residues) downstream of the conserved

arginine (i.e., FIG. 6A, residue number 744) located at the C-terminal boundary of the catalytic domain can be required to engineer a polypeptide suitable for crystallization.

5           In those situations where the resulting polypeptide contains cysteine residues that interfere with crystallization (e.g., cysteine residue numbers 488 and 584 in the FGF-R1 sequence shown in FIG. 6A), such cysteine residues can be substituted with an appropriate  
10 amino acid that does not readily form covalent bonds with other amino acid residues under crystallization conditions; e.g., by substituting the cysteine with Ala, Ser or Gly. Any cysteine located in a non-helical or non- $\beta$ -stranded segment, based on secondary structure  
15 assignments, are good candidates for replacement. For example, cysteines located in regions corresponding to the glycine-rich-loop, the kinase insert, the juxtamembrane region or the activation loop are prime candidates for replacement. However, substitutions of  
20 cysteine residues that are conserved among the kinases (e.g., FIG. 6A at positions 725 and 736) are preferably avoided.

#### I. PTK Associated Diseases

25           Blood vessel proliferative disorders refer to angiogenic and vasculogenic disorders generally resulting in abnormal proliferation of blood vessels. The formation and spreading of blood vessels play  
important roles in a variety of physiological processes  
30 such as embryonic development, corpus luteum formation, wound healing and organ regeneration. They also play a

pivotal role in cancer development. Other examples of blood vessel proliferation disorders include arthritis, where new capillary blood vessels invade the joint and destroy cartilage, and ocular diseases, like diabetic  
5 retinopathy, where new capillaries in the retina invade the vitreous, bleed and cause blindness. Conversely, disorders related to the shrinkage, contraction or closing of blood vessels are implicated in such diseases as restenosis.

10       Fibrotic disorders refer to the abnormal formation of extracellular matrix. Examples of fibrotic disorders include hepatic cirrhosis and mesangial cell proliferative disorders. Hepatic cirrhosis is characterized by the increase in extracellular matrix  
15 constituents resulting in the formation of a hepatic scar. Hepatic cirrhosis can cause diseases such as cirrhosis of the liver. An increased extracellular matrix resulting in a hepatic scar can also be caused by viral infection such as hepatitis.

20       Mesangial cell proliferative disorders refer to disorders brought about by abnormal proliferation of mesangial cells. Mesangial proliferative disorders include various human renal diseases, such as glomerulonephritis, diabetic nephropathy, malignant  
25 nephrosclerosis, thrombotic microangiopathy syndromes, transplant rejection, and glomerulopathies. The PDGF-R has been implicated in the maintenance of mesangial cell proliferation. Floege et al., 1993, *Kidney International* 43:47S-54S.

30       PTKs are directly associated with the cell proliferative disorders described above. For example,

some members of the receptor PTK family have been associated with the development of cancer. Some of these receptors, like EGFR (Tuzi et al., 1991, *Br. J. Cancer* 63:227-233; Torp et al., 1992, *APMIS* 100:713-719) HER2/neu (Slamon et al., 1989, *Science* 244:707-712) and PDGF-R (Kumabe et al., 1992, *Oncogene* 7:627-633) are over-expressed in many tumors and/or persistently activated by autocrine loops. In fact, PTK over-expression (Akbasak and Suner-Akbasak et al., 1992, *J. Neurol. Sci.* 111:119-133; Dickson et al., 1992, *Cancer Treatment Res.* 61:249-273; Korc et al., 1992, *J. Clin. Invest.* 90:1352-1360) and autocrine loop stimulation (Lee and Donoghue, 1992, *J. Cell. Biol.* 118:1057-1070; Korc et al., *supra*; Akbasak and Suner-Akbasak et al., *supra*) account for the most common and severe cancers. For example, EGFR is associated with squamous cell carcinoma, astrocytoma, glioblastoma, head and neck cancer, lung cancer and bladder cancer. HER2 is associated with breast, ovarian, gastric, lung, pancreas and bladder cancer. PDGF-R is associated with glioblastoma, lung, ovarian, melanoma and prostate cancer. The receptor PTK c-met is generally associated with hepatocarcinogenesis and thus hepatocellular carcinoma. Additionally, c-met is linked to malignant tumor formation. More specifically, c-met has been associated with, among other cancers, colorectal, thyroid, pancreatic and gastric carcinoma, leukemia and lymphoma. Additionally, over-expression of the c-met gene has been detected in patients with Hodgkins disease, Burkitts disease, and the lymphoma cell line.

The IGF-I receptor PTK, in addition to being

implicated in nutritional support and in type-II diabetes, is also associated with several types of cancers. For example, IGF-I has been implicated as an autocrine growth stimulator for several tumor types, e.g. human breast cancer carcinoma cells (Arteaga et al., 1989, *J. Clin. Invest.* 84:1418-1423) and small lung tumor cells (Macauley et al., 1990, *Cancer Res.* 50:2511-2517). In addition, IGF-I, integrally involved in the normal growth and differentiation of the nervous system, appears to be an autocrine stimulator of human gliomas. Sandberg-Nordqvist et al., 1993, *Cancer Res.* 53:2475-2478. The importance of the IGF-IR and its modulators in cell proliferation is further supported by the fact that many cell types in culture (fibroblasts, epithelial cells, smooth muscle cells, T-lymphocytes, myeloid cells, chondrocytes, osteoblasts, the stem cells of the bone marrow) are stimulated to grow by IGF-I. Goldring and Goldring, 1991, *Eukaryotic Gene Expression* 1:301-326. In a series of recent publications suggest that IGF-IR plays a central role in the mechanisms of transformation and, as such, could be a preferred target for therapeutic interventions for a broad spectrum of human malignancies. Baserga, 1995, *Cancer Res.* 55:249-252; Baserga, 1994, *Cell* 79:927-930; Coppola et al., 1994, *Mol. Cell. Biol.* 14:4588-4595.

The association between abnormalities in receptor PTKs and disease are not restricted to cancer, however. For example, receptor PTKs are associated with metabolic diseases like psoriasis, diabetes mellitus, wound healing, inflammation, and neurodegenerative diseases. EGF-R is indicated in corneal and dermal wound healing.

Defects in Insulin-R and IGF-IR are indicated in type-II diabetes mellitus. A more complete correlation between specific receptor PTKs and their therapeutic indications is set forth in Plowman et al., 1994, *DN&P* 7:334-339.

5           Non-receptor PTKs, including src, abl, fps, yes, fyn, lyn, lck, blk, hck, fgr, yrk (reviewed by Bolen et al., 1992, *FASEB J.* 6:3403-3409), are involved in the proliferative and metabolic signal transduction pathways also associated with receptor PTKs. Therefore, the  
10   present invention is also directed towards designing modulators against this class of PTKs. For example, mutated src (v-src) is an oncoprotein (pp60<sup>v-src</sup>) in chicken. Moreover, its cellular homolog, the proto-oncogene pp60<sup>c-src</sup> transmits oncogenic signals of many  
15   receptors. For example, over-expression of EGF-R or HER2/neu in tumors leads to the constitutive activation of pp60<sup>c-src</sup>, which is characteristic of the malignant cell but absent in the normal cell. On the other hand, mice deficient for the expression of c-src exhibit an  
20   osteopetrotic phenotype, indicating a key participation of c-src in osteoclast function and a possible involvement in related disorders. Similarly, Zap 70 is implicated in T-cell signaling. Both receptor PTKs and non-receptor PTKs are connected to hyperimmune  
25   disorders.

          The instant invention is directed in part towards designing modulators of PTK function that could indirectly kill tumors by cutting off their source of sustenance. Normal vasculogenesis and angiogenesis play  
30   important roles in a variety of physiological processes such as embryonic development, wound healing, organ



regeneration and female reproductive processes such as follicle development in the corpus luteum during ovulation and placental growth after pregnancy. Folkman and Shing, 1992, *J. Biological Chem.* 267:10931-34.

5 However, many diseases are driven by persistent unregulated or inappropriate angiogenesis. For example, in arthritis, new capillary blood vessels invade the joint and destroy the cartilage. In diabetes, new capillaries in the retina invade the vitreous, bleed and  
10 cause blindness. Folkman, 1987, in: *Congress of Thrombosis and Haemostasis* (Verstraete, et. al, eds.), Leuven University Press, Leuven, pp.583-596. Ocular neovascularization is the most common cause of blindness and dominates approximately twenty (20) eye diseases.

15 Moreover, vasculogenesis and/or angiogenesis can be associated with the growth of malignant solid tumors and metastasis. A tumor must continuously stimulate the growth of new capillary blood vessels for the tumor itself to grow. Furthermore, the new blood vessels  
20 embedded in a tumor provide a gateway for tumor cells to enter the circulation and to metastasize to distant sites in the body. Folkman, 1990, *J. Natl. Cancer Inst.* 82:4-6; Klagsbrunn and Soker, 1993, *Current Biology* 3:699-702; Folkman, 1991, *J. Natl., Cancer Inst.* 82:4-6;  
25 Weidner et al., 1991, *New Engl. J. Med.* 324:1-5.

Several polypeptides with in vitro endothelial cell growth promoting activity have been identified. Examples include acidic and basic fibroblastic growth factor ( $\alpha$ FGF,  $\beta$ FGF), vascular endothelial growth factor  
30 (VEGF) and placental growth factor. Unlike  $\alpha$ FGF and  $\beta$ FGF, VEGF has recently been reported to be an

endothelial cell specific mitogen. Ferrara and Henzel, 1989, *Biochem. Biophys. Res. Comm.* 161:851-858; Vaisman et al., 1990, *J. Biol. Chem.* 265:19461-19566.

Thus, identifying the specific receptors that bind  
5 FGF or VEGF is important for understanding endothelial  
cell proliferation regulation. Two structurally related  
receptor PTKs that bind VEGF with high affinity are  
identified: the flt-1 receptor (Shibuya et al., 1990,  
10 *Oncogene* 5:519-524; De Vries et al., 1992, *Science*  
255:989-991) and the KDR/FLK-1 receptor, discussed in  
the U.S. Patent Application No. 08/193,829. In  
addition, a receptor that binds  $\alpha$ FGF and  $\beta$ FGF is  
identified. Jaye et al., 1992, *Biochem. Biophys. Acta*  
1135:185-199). Consequently, these receptor PTKs most  
15 likely regulate endothelial cell proliferation.

FGFRs play important roles in angiogenesis, wound  
healing, embryonic development, and malignant  
transformation. Basilico and Moscatelli, 1992, *Adv.*  
*Cancer Res.* 59:115-165. Four mammalian FGFR (FGFR1-4)  
20 have been described and additional diversity is  
generated by alternative RNA splicing within the  
extracellular domains. Jaye et al., 1992, *Biochem.*  
*Biophys. Acta* 1135:185-199. Like other receptor PTKs,  
dimerization of FGF receptors is essential for their  
25 activation. Soluble or cell surface-bound heparin  
sulfate proteoglycans act in concert with FGF to induce  
dimerization (Schlessinger et al., 1995, *Cell* 83:357-  
360), which leads to autophosphorylation of specific  
tyrosine residues in the cytoplasmic domain. Mohammadi  
30 et al., 1996, *Mol. Cell Biol.* 16:977-989.

Mutations in three human FGF receptor genes, FGFR1,

FGFR2, and FGFR3, have been implicated in a variety of human genetic skeletal disorders. Mutations in FGFR1 and FGFR2 result in the premature fusion of the flat bones of the skull and cause the craniosynostosis syndromes, such as Apert (FGFR2) (Wilkie et al., 1994, Nat. Genet. 8:269-274), Pfeiffer (FGFR1 and FGFR2) (Muenke et al., 1994, Nat. Genet. 8:269-274), Jackson-Weiss (FGFR2) (Jabs et al., 1994, Nat. Genet. 8:275-279) and Crouzon (FGFR2) (Jabs et al., 1994, Nat. Genet. 8:275-279) syndromes. In contrast mutations in FGFR3 are implicated in long bone disorders and cause several clinically related forms of dwarfism including achondroplasia (Shiang et al., 1994, Cell 78:335-342), hypochondroplasia (Bellus et al., 1995, Nat. Genet. 10:357-359) and the neonatal lethal thanatophoric dysplasia (Tavormina et al., 1995, Nat. Genet. 9:321-328). It has been shown that these mutations lead to constitutive activation of the tyrosine kinase activity of FGFR3 (Webster et al., 1996, EMBO J. 15:520-527). Furthermore gene-targeting experiments in mice have revealed an essential role for FGFR3 in developmental bone formation (Deng et al., 1996, Cell 84:911-921).

Another major role proposed for FGFs *in vivo* is the induction of angiogenesis (Folkman and Klagsbrun, 1987, Science 236:442). Therefore, inappropriate expression of FGFs or of their receptors or aberrant function of the tyrosine kinase activity could contribute to several human angiogenic pathologies such as diabetic retinopathy, rheumatoid arthritis, atherosclerosis and tumor neovascularization (Klagsbrun and Edelman, 1989, Arteriosclerosis 9:269). Moreover, FGFs are thought to

be involved in malignant transformation. Indeed, the genes coding for the three FGF homologues int-2, FGF-5 and hst-1/K-fgf were originally isolated as oncogenes. Furthermore, the cDNA encoding FGFR1 and FGFR2 are  
5 amplified in a population of breast cancers (Adnane et al., 1991, *Oncogene* 6:659-663). Over-expression of FGF receptors has been also detected in human pancreatic cancers, astrocytomas, salivary gland adenomasarcomas, Kaposi sarcomas, ovarian cancers and prostate cancers.

10 Evidence, such as the disclosure set forth in copending U.S. Application Serial No. 08/193,829, strongly suggests that VEGF is not only responsible for endothelial cell proliferation, but also is a prime regulator of normal and pathological angiogenesis. See  
15 generally, Klagsburn and Soker, 1993, *Current Biology* 3:699-702; Houck et al., 1992, *J. Biol. Chem.* 267:26031-26037. Moreover, it has been shown that KDR/FLK-1 and flt-1 are abundantly expressed in the proliferating endothelial cells of a growing tumor, but  
20 not in the surrounding quiescent endothelial cells. Plate et al., 1992, *Nature* 359:845-848; Shweiki et al., 1992, *Nature* 359:843-845.

The invention is directed to designing and identifying modulators of receptor and non-receptor PTK  
25 functions that could modify the inappropriate activity of a PTK involved with a clinical disorder. The rational design and identification of modulators of PTK functions can be accomplished by utilizing the structural coordinates that define a PTK three  
30 dimensional structure.

## II. Modulators of PTK functions as Therapeutics for Disease

As a consequence of the disorders discussed above, scientists in the biomedical community are searching for modulators of PTK functions that down-regulate signal transduction pathways associated with inappropriate PTK activity.

In particular, small molecule modulators of PTK functions are sought as some can traverse the cell membrane and do not hydrolyze in acidic environments. Some compounds have already been discovered. For example, bis monocyclic, bicyclic or heterocyclic aryl compounds (PCT WO 92/20642), vinylene-azaindole derivatives (PCT WO 94/14808) 1-cyclopropyl-4-pyridyl-quinolones (U.S. Patent No. 5,330,992), styryl compounds (U.S. Patent No. 5,217,999), styryl-substituted pyridyl compounds (U.S. Patent No. 5,302,606), certain quinazoline derivatives (EP Application No. 0 566 266 A1), seleoindoles and selenides (PCT WO 94/03427), tricyclic polyhydroxylic compounds (PCT WO 92/21660), and benzylphosphonic acid compounds (PCT WO 91/15495) are described as PTK inhibitors.

Although some modulators of PTK function are known, many of these are not specific for PTK subfamilies and will therefore cause multiple side-effects as therapeutics. Compounds of the oxindolinone/thiolindolinone family, however, are specific for the FGF receptor subfamily (U.S. Patent Application Serial No. 08/702,232, filed August 23, 1996, invented by Tang et al., entitled "Indolinone Combinatorial Libraries and Related Products and Methods for the Treatment of

Disease," Attorney Docket No. 221/187). In addition, compounds of the oxindolinone/thiolindolinone family are non-hydrolyzable in acidic conditions and can be highly bioavailable.

5           The invention provides information regarding the specific interactions between a PTK and compounds of the oxindolinone/thiolindolinone family. Although the use of X-ray crystallography has provided three dimensional structures of other PTKs, the PTKs in these structures  
10       are not complexed with PTK subfamily specific, hydrolysis resistant, highly bioavailable small molecules. The X-ray crystallography techniques used in the current invention resolve interactions between a PTK and compounds in complex with it at the atomic level,  
15       which provides detailed information regarding the orientation of chemical groups defining an effective modulator of PTK function.

### III. Crystalline Tyrosine Kinases

20           Crystalline PTKs of the invention include native crystals, derivative crystals and co-crystals. The native crystals of the invention generally comprise substantially pure polypeptides corresponding to the tyrosine kinase domain in crystalline form.

25           It is to be understood that the crystalline tyrosine kinase domains of the invention are not limited to naturally occurring or native tyrosine kinase domains. Indeed, the crystals of the invention include mutants of native tyrosine kinase domains. Mutants of  
30       native tyrosine kinase domains are obtained by replacing at least one amino acid residue in a native tyrosine

kinase domain with a different amino acid residue, or by adding or deleting amino acid residues within the native polypeptide or at the N- or C-terminus of the native polypeptide, and have substantially the same three-dimensional structure as the native tyrosine kinase domain from which the mutant is derived.

By having substantially the same three-dimensional structure is meant having a set of atomic structure coordinates that have a root-mean-square deviation of less than or equal to about 2Å when superimposed with the atomic structure coordinates of the native tyrosine kinase domain from which the mutant is derived when at least about 50% to 100% of the C $\alpha$  atoms of the native tyrosine kinase domain are included in the superposition.

Amino acid substitutions, deletions and additions which do not significantly interfere with the three-dimensional structure of the tyrosine kinase domain will depend, in part, on the region of the tyrosine kinase domain where the substitution, addition or deletion occurs. In highly variable regions of the molecule, such as those shown in FIG. 6, non-conservative substitutions as well as conservative substitutions may be tolerated without significantly disrupting the three-dimensional structure of the molecule. In highly conserved regions, or regions containing significant secondary structure, such as those regions shown in FIG. 6, conservative amino acid substitutions are preferred.

Conservative amino acid substitutions are well-known in the art, and include substitutions made on the basis of similarity in polarity, charge, solubility,

hydrophobicity, hydrophilicity and/or the amphipathic nature of the amino acid residues involved. For example, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids  
5 include lysine and arginine; amino acids with uncharged polar head groups having similar hydrophilicity values include the following: leucine, isoleucine, valine; glycine, alanine; asparagine, glutamine; serine, threonine; phenylalanine, tyrosine. Other conservative  
10 amino acid substitutions are well known in the art.

For tyrosine kinase domains obtained in whole or in part by chemical synthesis, the selection of amino acids available for substitution or addition is not limited to the genetically encoded amino acids. Indeed, the  
15 mutants described herein may contain non-genetically encoded amino acids. Conservative amino acid substitutions for many of the commonly known non-genetically encoded amino acids are well known in the art. Conservative substitutions for other amino acids  
20 can be determined based on their physical properties as compared to the properties of the genetically encoded amino acids.

In some instances, it may be particularly advantageous or convenient to substitute, delete and/or  
25 add amino acid residues to a native tyrosine kinase domain in order to provide convenient cloning sites in cDNA encoding the polypeptide, to aid in purification of the polypeptide, and for crystallization of the polypeptide. Such substitutions, deletions and/or  
30 additions which do not substantially alter the three dimensional structure of the native tyrosine kinase



domain will be apparent to those of ordinary skill in the art.

It should be noted that the mutants contemplated herein need not exhibit PTK activity. Indeed, amino acid substitutions, additions or deletions that interfere with the kinase activity of the tyrosine kinase domain but which do not significantly alter the three-dimensional structure of the domain are specifically contemplated by the invention. Such crystalline polypeptides, or the atomic structure coordinates obtained therefrom, can be used to identify compounds that bind to the native domain. These compounds may affect the activity of the native domain.

The derivative crystals of the invention generally comprise a crystalline tyrosine kinase domain polypeptide in covalent association with one or more heavy metal atoms. The polypeptide may correspond to a native or a mutated tyrosine kinase domain. Heavy metal atoms useful for providing derivative crystals include, by way of example and not limitation, gold, mercury, etc.

The co-crystals of the invention generally comprise a crystalline tyrosine kinase domain polypeptide in association with one or more compounds. The association may be covalent or non-covalent. Such compounds include, but are not limited to, cofactors, substrates, substrate analogues, inhibitors, allosteric effectors, etc.

#### IV. Three Dimensional Structure Determination Using X-ray Crystallography

X-ray crystallography is a method of solving the three dimensional structures of molecules. The structure of a molecule is calculated from X-ray diffraction patterns using a crystal as a diffraction grating. Three dimensional structures of protein molecules arise from crystals grown from a concentrated aqueous solution of that protein. The process of X-ray crystallography can include the following steps:

- (a) synthesizing and isolating a polypeptide;
- (b) growing a crystal from an aqueous solution comprising the polypeptide with or without a modulator; and
- (c) collecting X-ray diffraction patterns from the crystals, determining unit cell dimensions and symmetry, determining electron density, fitting the amino acid sequence of the polypeptide to the electron density, and refining the structure.

#### Production of Polypeptides

The native and mutated tyrosine kinase domain polypeptides described herein may be chemically synthesized in whole or part using techniques that are well-known in the art (see, e.g., Creighton, 1983). Alternatively, methods which are well known to those skilled in the art can be used to construct expression vectors containing the native or mutated tyrosine kinase domain polypeptide coding sequence and appropriate

transcriptional/translational control signals. These methods include *in vitro* recombinant DNA techniques, synthetic techniques and *in vivo* recombination/genetic recombination. See, for example, the techniques  
5 described in Maniatis et al., 1989 and Ausubel et al., 1989.

A variety of host-expression vector systems may be utilized to express the tyrosine kinase domain coding sequence. These include but are not limited to  
10 microorganisms such as bacteria transformed with recombinant bacteriophage DNA, plasmid DNA or cosmid DNA expression vectors containing the tyrosine kinase domain coding sequence; yeast transformed with recombinant yeast expression vectors containing the tyrosine kinase  
15 domain coding sequence; insect cell systems infected with recombinant virus expression vectors (e.g., baculovirus) containing the tyrosine kinase domain coding sequence; plant cell systems infected with recombinant virus expression vectors (e.g., cauliflower  
20 mosaic virus, CaMV; tobacco mosaic virus, TMV) or transformed with recombinant plasmid expression vectors (e.g., Ti plasmid) containing the tyrosine kinase domain coding sequence; or animal cell systems. The expression elements of these systems vary in their strength and  
25 specificities.

Depending on the host/vector system utilized, any of a number of suitable transcription and translation elements, including constitutive and inducible promoters, may be used in the expression vector. For  
30 example, when cloning in bacterial systems, inducible promoters such as pL of bacteriophage  $\lambda$ , plac, ptrp,

ptac (ptrp-lac hybrid promoter) and the like may be used; when cloning in insect cell systems, promoters such as the baculovirus polyhedrin promoter may be used; when cloning in plant cell systems, promoters derived from the genome of plant cells (e.g., heat shock promoters; the promoter for the small subunit of RUBISCO; the promoter for the chlorophyll a/b binding protein) or from plant viruses (e.g., the 35S RNA promoter of CaMV; the coat protein promoter of TMV) may be used; when cloning in mammalian cell systems, promoters derived from the genome of mammalian cells (e.g., metallothionein promoter) or from mammalian viruses (e.g., the adenovirus late promoter; the vaccinia virus 7.5K promoter) may be used; when generating cell lines that contain multiple copies of the tyrosine kinase domain DNA, SV40-, BPV- and EBV-based vectors may be used with an appropriate selectable marker.

Methods describing methods of DNA manipulation, vectors, various types of cells used, methods of incorporating the vectors into the cells, expression techniques, protein purification and isolation methods, and protein concentration methods are disclosed in detail with respect to the protein PYK-2 in PCT publication WO 96/18738. This publication is incorporated herein by reference in its entirety, including any drawings. Those skilled in the art will appreciate that such descriptions are applicable to the present invention and can be easily adapted to it.

### Crystal Growth

Crystals are grown from an aqueous solution containing the purified and concentrated polypeptide by a variety of techniques. These techniques include  
5 batch, liquid, bridge, dialysis, vapor diffusion, and hanging drop methods. McPherson, 1982, John Wiley, New York; McPherson, 1990, *Eur. J. Biochem.* 189:1-23; Webber, 1991, *Adv. Protein Chem.* 41:1-36, incorporated  
10 by reference herein in its entirety, including all figures, tables, and drawings.

Generally, the native crystals of the invention are grown by adding precipitants to the concentrated solution of the polypeptide corresponding to the PTK catalytic domain. The precipitants are added at a  
15 concentration just below that necessary to precipitate the protein. Water is removed by controlled evaporation to produce precipitating conditions, which are maintained until crystal growth ceases.

For crystals of the invention, it has been found  
20 that hanging drops containing about 2.0  $\mu\text{L}$  of tyrosine kinase domain polypeptide (10 mg/mL in 10mM Tris-HCl, pH 8.0, 10 mM NaCl and 2 mM dithiothreitol) and 2.0  $\mu\text{L}$  reservoir solution (16% w/v polyethylene glycol MW 10000, 0.3 M  $(\text{NH}_4)_2\text{SO}_4$ , 5% v/v ethylene glycol or  
25 glycerol and 100 mM bis-Tris, pH 6.5) suspended over 0.5 mL reservoir buffer for about 3-4 weeks at 4°C provide crystals suitable for high resolution X-ray structure determination.

Those of ordinary skill in the art will recognize  
30 that the above-described crystallization conditions can be varied. Such variations may be used alone or in

combination, and include polypeptide solutions containing polypeptide concentrations between about 1 mg/mL and about 60 mg/mL, Tris-HCl concentrations between about 10 mM and about 200 mM, dithiothreitol  
5 concentrations between about 0 mM and about 20 mM, pH ranges between about 5.5 and about 7.5; and reservoir solutions containing polyethylene glycol concentrations between about 10% and about 30% (w/v), polyethylene glycol molecular weights between about 1000 and about  
10 20,000,  $(\text{NH}_4)_2\text{SO}_4$  concentrations between about 0.1 M and about 0.5 M, ethylene glycol or glycerol concentrations between about 0% and about 20% (v/v), bis-Tris concentrations between about 10 mM and about 200 mM, pH ranges between about 5.5 and about 7.5 and temperature  
15 ranges between about 0° C and about 25°C. Other buffer solutions may be used such as HEPES buffer, so long as the desired pH range is maintained.

Derivative crystals of the invention can be obtained by soaking native crystals in mother liquor  
20 containing salts of heavy metal atoms. It has been found that soaking a native crystal in a solution containing about 0.1 mM to about 5 mM thimerosal, 4-chloromeruribenzoic acid or  $\text{KAu}(\text{CN})_2$  for about 2 hr to about 72 hr provides derivative crystals suitable for  
25 use as isomorphous replacements in determining the X-ray crystal structure of the tyrosine kinase domain polypeptide.

Co-crystals of the invention can be obtained by soaking a native crystal in mother liquor containing  
30 compound that bind the kinase domain, or described above, or can be obtained by co-crystallizing the kinase

domain polypeptide in the presence of one or more binding compounds.

For co-crystals of tyrosine kinase domain polypeptide in co-complex with AMP-PCP, it has been  
5 found that co-crystallizing the kinase domain polypeptide in the presence of AMP-PCP using the above-described crystallization conditions for obtaining native crystals with a polypeptide solution additionally containing 10 mM AMP-PCP and 20 mM  $MgCl_2$ , yields co-  
10 crystals suitable for the high resolution structure determination by X-ray crystallography. Of course, those having skill in the art will recognize that the concentrations of AMP-PCP and  $MgCl_2$  in the polypeptide solution can be varied, alone or in combination with the  
15 variations described above for native crystals. Such variations include polypeptide solutions containing AMP-PCP concentrations between 0.1 mM and 50 mM and  $MgCl_2$  concentrations between 0 mM and 50 mM.

Crystals comprising a polypeptide corresponding to  
20 a PTK catalytic domain complexed with a compound can be grown by one of two methods. In the first method, the modulator is added to the aqueous solution containing the polypeptide corresponding to the PTK catalytic domain before the crystal is grown. In the second  
25 method, the modulator is soaked into an already existing crystal of a polypeptide corresponding to a PTK catalytic domain.

Crystalline FGFR

In one illustrative embodiment, the invention provides crystals of FGFR1. The crystals were obtained by the methods provided in the Examples. The FGFR1  
5 crystals, which may be native crystals, derivative crystals or co-crystals, have monoclinic unit cells (i.e., unit cells wherein  $a \neq b \neq c$ ;  $\alpha = \gamma = 90^\circ$ ; and  $\beta > 90^\circ$ ) and space group symmetry C2. There are two FGFR1 molecules in the asymmetric unit, related by an approximate two-  
10 fold axis.

Two forms of crystalline FGFR1 were obtained. In one form (designated "C2-A form"), the unit cell has dimensions of  $a=208.3 \text{ \AA}$ ,  $b=57.2 \text{ \AA}$ ,  $c=65.5 \text{ \AA}$  and  $\beta=107.2^\circ$ . In another form (designated "C2-B form"), the  
15 unit cell has dimensions of  $a=211.6 \text{ \AA}$ ,  $b=51.3 \text{ \AA}$ ,  $c=66.1 \text{ \AA}$  and  $\beta=107.7^\circ$ .

Three distinct two-fold related FGFR1 dimers are observed in both the C2-A and C2-B forms of the FGFR1 crystal, one non-crystallographically related dimer and  
20 two crystallographically related dimers. The non-crystallographically related dimer comprises the two molecules in the asymmetric unit. The residues making up the dimer interface are located in C-terminal lobe. In this dimer, the C-terminal lobes abut with the N-  
25 terminal lobes distal to one another. The total amount of surface area buried in the surface is about  $950 \text{ \AA}^2$ . Very few of the interactions in the interface are of a specific nature, e.g., hydrogen-bonding or close packing of hydrophobic residues.

30 There are two crystallographically-related dimers in the C2 lattice. In the first dimer, the residues



that constitute the dimer interface are limited to those in the  $\beta$ -sheet of the N-terminal lobe (amino acid residues 477, 479, 498, 506, 508 and 496). The total surface area buried in this interface is about 670  $\text{\AA}^2$ .

5 The interactions are rather specific. Three hydrophobic residues which are partially solvent-exposed in the monomer, Val-479, Ile-498 and Val-508, come together with their two-fold-related residues to form a compact hydrophobic plug. This plug is capped on either side by  
10 a salt bridge between Arg-477 and Glu-496. In addition, two main-chain hydrogen-bonds connect the  $\beta$ -sheets of the two monomers at the start of  $\beta 3$  (amino acid residues 506 and 508). The residues in this dimer interface, or their residue character, are generally conserved in the  
15 mammalian FGF receptors, but not in the invertebrate homologues.

The other crystallographically-related dimer buries about 1650  $\text{\AA}^2$  in its interface. In this dimer, the  $\alpha C$  helices of the two monomers are nearly parallel and  
20 contact each other at their C-terminal ends. Met-534 and Met-537 are in van der Waals contact with their two-fold-related residues. Other hydrophobic contacts involve Pro-466 with Ile-648 and Pro-469 with Ile-676 and Thr-678. In addition, hydrogen bonds (side-chain to  
25 main-chain) are made between Arg-470 and Lys-618 and between His-649 and Glu-464, and there are several water molecules that bridge the two monomers through hydrogen bonding.

In the C2-B form of the crystal, the monomers of  
30 this second crystallographically-related dimer are shifted slightly with respect to one another ( $6^\circ$

rotation), indicating that this interface is somewhat fluid.

In both of the crystallographically-related dimers, the N-termini of the two molecules comprising the dimer point in the same direction and are reasonably close to one another.

10 Determining Unit Cell Dimensions and the Three Dimensional Structure of a Polypeptide or Polypeptide Complex

Once the crystal is grown, it can be placed in a glass capillary tube and mounted onto a holding device connected to an X-ray generator and an X-ray detection device. Collection of X-ray diffraction patterns are well documented by those in the art. Ducruix and Geige, 1992, IRL Press, Oxford, England, and references cited therein. A beam of X-rays enter the crystal and then diffract from the crystal. An X-ray detection device can be utilized to record the diffraction patterns emanating from the crystal. Although the X-ray detection device on older models of these instruments is a piece of film, modern instruments digitally record X-ray diffraction scattering.

25 Methods for obtaining the three dimensional structure of the crystalline form of a peptide molecule or molecule complex are well known in the art. Ducruix and Geige, 1992, IRL Press, Oxford, England, and references cited therein. The following are steps in the process of determining the three dimensional structure of a molecule or complex from X-ray diffraction data.

After the X-ray diffraction patterns are collected from the crystal, the unit cell dimensions and orientation in the crystal can be determined. They can be determined from the spacing between the diffraction emissions as well as the patterns made from these emissions. The unit cell dimensions are characterized in three dimensions in units of Angstroms (one Å =  $10^{-10}$  meters) and by angles at each vertices. The symmetry of the unit cell in the crystals is also characterized at this stage. The symmetry of the unit cell in the crystal simplifies the complexity of the collected data by identifying repeating patterns. Application of the symmetry and dimensions of the unit cell is described below.

Each diffraction pattern emission is characterized as a vector and the data collected at this stage of the method determines the amplitude of each vector. The phases of the vectors can be determined using multiple techniques. In one method, heavy atoms can be soaked into a crystal, a method called isomorphous replacement, and the phases of the vectors can be determined by using these heavy atoms as reference points in the X-ray analysis. Otwinowski, 1991, Daresbury, United Kingdom, 80-86. The isomorphous replacement method usually requires more than one heavy atom derivative. In another method, the amplitudes and phases of vectors from a crystalline polypeptide with an already determined structure can be applied to the amplitudes of the vectors from a crystalline polypeptide of unknown structure and consequently determine the phases of these vectors. This second method is known as molecular

replacement and the protein structure which is used as a reference must have a closely related structure to the protein of interest. Naraza, 1994, *Proteins* 11:281-296. Thus, the vector information from a PTK of known  
5 structure, such as those reported herein, are useful for the molecular replacement analysis of another PTK with unknown structure.

Once the phases of the vectors describing the unit cell of a crystal are determined, the vector amplitudes  
10 and phases, unit cell dimensions, and unit cell symmetry can be used as terms in a Fourier transform function. The Fourier transform function calculates the electron density in the unit cell from these measurements. The electron density that describes one of the molecules or  
15 one of the molecule complexes in the unit cell can be referred to as an electron density map. The amino acid structures of the sequence or the molecular structures of compounds complexed with the crystalline polypeptide may then fit to the electron density using a variety of  
20 computer programs. This step of the process is sometimes referred to as model building and can be accomplished by using computer programs such as TOM/FRODO. Jones, 1985, *Methods in Enzymology* 115:157-171.

25 A theoretical electron density map can then be calculated from the amino acid structures fit to the experimentally determined electron density. The theoretical and experimental electron density maps can be compared to one another and the agreement between  
30 these two maps can be described by a parameter called an R-factor. A low value for an R-factor describes a high

degree of overlapping electron density between a theoretical and experimental electron density map.

The *R*-factor is then minimized by using computer programs that refine the theoretical electron density map. A computer program such as X-PLOR can be used for model refinement by those skilled in the art. Brünger, 1992, *Nature* 355:472-475. Refinement may be achieved in an iterative process. A first step can entail altering the conformation of atoms defined in an electron density map. The conformations of the atoms can be altered by simulating a rise in temperature which will increase the vibrational frequency of the bonds and modify positions of atoms in the structure. At a particular point in the atomic perturbation process, a force field, which typically defines interactions between atoms in terms of allowed bond angles and bond lengths, Van der Waals interactions, hydrogen bonds, ionic interactions, and hydrophobic interactions, can be applied to the system of atoms. Favorable interactions may be described in terms of free energy and the atoms can be moved over many iterations until a free energy minimum is achieved. The refinement process can be iterated until the *R*-factor reaches a minimum value.

The three dimensional structure of the molecule or molecule complex is described by atoms that fit the theoretical electron density characterized by a minimum *R*-value. A file can then be created for the three dimensional structure that defines each atom by coordinates in three dimensions. Examples of such structural coordinate files are defined in Table 1, Table 2, Table 3, and Table 4.

## V. Structures of FGFR1

The present invention provides high-resolution three-dimensional structures and atomic structure coordinates of crystalline FGFR1 and crystalline FGFR1:AMP-PCP co-complex as determined by X-ray crystallography. The specific methods used to obtain the structure coordinates are provided in the examples. The atomic structure coordinates of crystalline FGFR1, obtained from the C2-A form of the crystal to 2.0 Å resolution, are listed in Table 3; the coordinates of crystalline FGFR1:AMP-PCP co-complex, obtained from the C2-A form of the crystal to 2.3 Å resolution are listed in Table 4.

Those having skill in the art will recognize that atomic structure coordinates as determined by X-ray crystallography are not without error. Thus, it is to be understood that any set of structure coordinates obtained for crystals of FGFR1, whether native crystals, derivative crystals or co-crystals, that have a root mean square deviation ("r.m.s.d.") of less than or equal to about 1.5 Å when superimposed, using backbone atoms (N, C<sub>α</sub>, C and O), on the structure coordinates listed in Table 3 or Table 4 are considered to be identical with the structure coordinates listed in the Tables when at least about 50% to 100% of the backbone atoms of FGFR1 are included in the superposition.

Referring now to FIG. 1, the overall structure of FGFR1 is bi-lobate. The N-terminal lobe of FGFR1 spans amino acid residues 456-567 (FIG. 3) and comprises a curled β-sheet of five anti-parallel strands (β1-β5) and

one  $\alpha$ -helix ( $\alpha$ C). The C-terminal lobe spans amino acid residues 568-765 (FIG. 3) and comprises two  $\beta$ -strands ( $\beta$ 7,  $\beta$ 8) and seven  $\alpha$ -helices ( $\alpha$ D,  $\alpha$ E,  $\alpha$ EF,  $\alpha$ F- $\alpha$ I). The secondary structure nomenclature follows that used for IRK (Hubbard et al., 1994) which in turn is based on the assignments for cAPK (Knighton et al., 1991). FIG. 2 shows a stereo view of a  $C_\alpha$  trace of FGFR1 in the same orientation as FIG. 1.

A structure-based sequence alignment of the tyrosine kinase domains of human fibroblast growth factor receptor 1 (human FGFR1; labelled FGFR1), human fibroblast growth factor receptors 2, 3 and 4 (labelled FGFR2, FGFR3 and FGFR4, respectively), a *D. melanogaster* homologue (labelled DFDFR1), a *C. elegans* homologue (labelled EGL-15) and insulin receptor kinase (labelled IRK), is shown in FIG. 3. The sequence of FGFR1, which is not shown in FIG. 3 is identical to the sequence of FGFR1 except that FGFR1 has the following amino acid substitutions and additions: Cys-488 - Ala, Cys-584 - Ser, Leu-457 - Val and an additional five N-terminal amino acids (Ser-Ala-Ala-Gly-Thr). The secondary structure assignments for FGFR1 and IRK were obtained using the Kabsch and Sander algorithm (Kabsch and Sander, 1983) as implemented in PROCHECK (Laskowski et al., 1993). In the FGF receptor sequences, a period represents sequence identity to FGFR1. In the IRK sequence, residues that are identical to FGFR1 are highlighted. A hyphen denotes an insertion.

The numbers under the EGL-15 sequence represent the fractional solvent accessibility (FSA2) of the residue in the FGFR1 structure. The FSA ratio is the ratio of

the solvent-accessible surface area of a residue in a Gly-X-Gly tripeptide compared to that in the FGFR1 structure. A value of 0 represents an FSA between 0.00 and 0.09; 1 represents an FSA between 0.10 and 0.19, etc. The higher the value, the more solvent-exposed the residue. An asterisk or pound sign in the FSA line indicates that the residue (asterisk) or side chain (pound sign) is not included in the atom model due to disorder. The numbers below the FSA line are the FSAs for those residues that form part of a dimer interface.

The amino acid residue numbers for FGFR1, and hence FGFR1, and IRK provided in FIG. 3 are used in the discussion that follows. Significant differences in the N-terminal lobe of FGFR1 as compared to IRK are found in the loops between  $\beta$  strands and in  $\alpha$ C. Residues from the end of  $\beta$ 1 through the beginning of  $\beta$ 2 (amino acid residues 485-490) form the nucleotide-binding loop, named because of its role in ATP coordination. This residue stretch contains the protein kinase-conserved GXGXXG sequence motif, where X is any amino acid. This loop is poorly ordered in one FGFR1 molecule in the asymmetric unit and disordered (*i.e.*, not included in the atomic model) in the other FGFR1 molecule in the asymmetric unit. The loop between  $\beta$ 1 and  $\beta$ 3 is disordered in both FGFR1 molecules comprising the asymmetric unit.

Referring now to FIG. 4A, which provides a ribbon diagram of the N-terminal lobes of FGFR1 and IRK in which the  $C_{\alpha}$  atoms of the  $\beta$ -sheets have been superimposed, it can be seen that in FGFR1  $\alpha$ C is longer by one helical turn than in IRK and is oriented such



that residues Lys-514 and Glu-531, which are conserved in protein kinases, form a salt bridge (represented by a black line). While not intending to be bound by theory, this salt bridge is believed to be important for proper positioning of the conserved lysine side chain, which coordinates two phosphate oxygens of ATP. The salt bridge is observed in the structures of cAPK (Knighton et al., 1991) and mitogen-activated protein kinase (MAPK) (Zhang et al., 1994).

Referring now to FIG. 4B, which provides a ribbon diagram of the C-terminal lobes of FGFR1 and IRK in which the C<sub>α</sub> atoms of the α-helices have been superimposed, a significant difference is found in the C-terminal helix of FGFR1 when compared to IRK; helix αI of FGFR1 is longer by seven residues (two helical turns) than its counterpart in IRK. The extended length of αI is presumably important in the biological functioning of FGF receptors, since the tyrosine autophosphorylation site to which an SH2 domain of PLCγ binds is six residues C-terminal to this helix.

The structure of FGFR1 displays an open disposition of the N- and C-terminal lobes. Despite having different sets of lattice contacts, the two FGFR1 molecules in the asymmetric unit have only a 2° difference in relative lobe orientation. It appears as though the steric interaction between residues in αC (Glu-531 and Met-534) with Phe-642 and Gly-643 of the protein kinase-conserved DFG sequence at the beginning of the activation loop accounts for the open conformation of FGFR1.

The active site of FGFR1 is characterized by at

least amino acid residues spanning the catalytic loop, activation loop and nucleotide binding loop. Unlike the structure of IRK, in which Tyr-1162 occupies the active site of the molecule, the active sites of both FGFR1  
5 molecules in the asymmetric unit are unoccupied.

The activation loop, which regulates phosphorylation, is characterized by at least residues 640 to 663. Quite surprisingly, while the activation loops of FGFR1 and IRK contain the same number of amino  
10 acid residues and share greater than 50% sequence homology, the paths of the polypeptide chains are strikingly dissimilar, diverging at Ala-640 (Gly-1149 in IRK) and reconverging at Val-664 (Val-1173 in IRK). Tyr-653 and Tyr 564 are not bound in the active site.  
15 Instead, these residues point away from it. Tyr-653 is in van der Waals contact with several hydrophobic residues (Val-664, Leu-672 and Phe-710) and is hydrogen-bonded via its hydroxyl group to a backbone carbonyl oxygen (Leu-672). Tyr-654 is more solvent exposed than  
20 Tyr-653, and its only van der Waals contact is with Val-706. Temperature factor data suggest that the activation loop is relatively mobile and adopts multiple conformations.

The catalytic loop of protein kinases lies between  
25 secondary structure elements  $\alpha E$  and  $\beta 7$  and contains an invariant aspartic acid residue (Asp-623 in FGFR1) which serves as the catalytic base in the phosphotransfer reaction, abstracting the proton from the hydroxyl group of the substrate tyrosine, serine or threonine. The  
30 catalytic loop sequence of FGFR1 comprises at least residues His-621 to Asn-628 (amino acid sequence

HRDLAARN), and is identical to that for IRK and most receptor and non-receptor PTKs.

In addition to the two tyrosine autophosphorylation sites in the activation loop (Tyr-653 and Tyr-654),  
5 there are four other autophosphorylation sites present in the FGFR1 crystals of the invention: one in the juxtamembrane region (Tyr-463), two in the kinase insert (Tyr-583 and Tyr-585) and one in the C-terminal lobe (Tyr-730) (Mohammadi et al., 1996). They exhibit  
10 varying degrees of conservation in mammalian FGF receptors: Tyr-463 and Tyr-585 in FGFR1 and 2; Tyr-583 in FGFR1, 2 and 3; and Tyr-730 in FGFR 1, 2, 3 and 4 (FIG. 3).

Referring now to FIG. 5, the positions of the  
15 autophosphorylation sites are mapped onto the FGFR1 structure. The juxtamembrane site (Tyr-463) and the residues N-terminal to it are disordered in one of the FGFR1 molecules in the asymmetric unit. In the other molecule in the asymmetric unit Tyr-463 is involved in a  
20 lattice contact.

The kinase insert region (the region between helices  $\alpha$ D and  $\alpha$ E) contains autophosphorylation sites Tyr-583 and Tyr-585 and is disordered in both FGFR1 molecules in the asymmetric unit of the C2-A form of the  
25 crystal. In the C2-B form, several lattice contacts partially pin down this region in one of the two FGFR1 molecules in the asymmetric unit, allowing a trace of the polypeptide chain to be made. There is no well-defined secondary structure for these residues. Tyr-  
30 730, situated in  $\alpha$ H in the C-terminal lobe, is nearly buried and the side-chain hydroxyl group makes two

hydrogen-bonds. The side chains of neighboring Met-732 and Met-733 are both buried. Therefore, phosphorylation of Tyr-730 would presumably require prior unfolding of  $\alpha$ H.

5        Aside from Tyr-730, the five other autophosphorylation sites (including Tyr-653 and Tyr-654) are found in relatively mobile segments of the FGFR1 molecule. While not intending to be bound by theory, the spatial positions of the autophosphorylation  
10       sites relative to the active site suggest that autophosphorylation occurs by a *trans* mechanism between two kinase domains, supporting the hypothesis that ligand-induced receptor dimerization is critical for the initiation of autophosphorylation events.

15       The structure of crystalline FGFR1:AMP-PCP co-complex is essentially similar to that observed for crystalline FGFR1. There are no significant changes in the structure of FGFR1 induced by AMP-PCP binding. In particular, binding of AMP-PCP, and by extension ATP,  
20       does not by itself promote lobe closure under the crystallization conditions used. Furthermore, complexation did not result in any noticeable changes in the conformations of the activation and nucleotide-binding loops.

25       The crystalline FGFR1:AMP-PCP co-complex contains hydrogen bonds that are present between N1 of adenine and the amide nitrogen of Ala-564 and between N6 of adenine and the carbonyl oxygen of Glu-562. The adenine ring is flanked on one side by Leu-484 and Val-492 (N-  
30       terminal lobe) and on the other side by Leu-630 (C-terminal lobe). The ribose hydroxyl groups make no

direct hydrogen bonds with protein atoms. Lys-514 is hydrogen-bonded to oxygens of the  $\beta$ - and  $\gamma$ -phosphates. There is no unambiguous electron density that would indicate the positions of  $Mg^{2+}$  ions. Generally, AMP-PCP appears to be coordinated rather loosely to unphosphorylated FGFR1, being bound to the "roof" of the cleft rather than being tightly sandwiched between the two kinase lobes.

#### 10 Structural Differences Between FGF-R and IRK

Several features distinguish the FGF-receptor structure from that of the insulin-receptor tyrosine kinase. These distinctions are likely to be important in signaling by FGF-receptors, and other monomeric receptors that are believed to undergo ligand-induced dimerization.

The most significant difference between the structures of FGFR1 and IRK is the conformation of the activation loop. In FGFR1, the activation loop is disposed such that the binding site for substrate peptides is blocked not by an activation loop tyrosine, as in IRK, but by Arg-661 and PTK-invariant Pro-663, while the ATP binding site is accessible. This represents another molecular mechanism by which a receptor PTK may be autoinhibited. The observed autoinhibition in FGFR1 would appear to be weaker than that in IRK because of fewer specific interactions made by residues in the FGFR1 activation loop (manifested in the relatively higher B-values) and the accessibility of the ATP site. One obvious distinction between the insulin and FGF receptor families is that in the former,

receptors are covalently linked heterotetramers ( $\alpha_2\beta_2$ ), whereas in the latter, receptor dimerization is ligand dependent. Receptors whose kinase domains are always in close proximity may require a stronger autoinhibition mechanism than those receptors that associate only upon ligand binding (Taylor et al., 1995). Since most growth factor receptors undergo ligand-dependent dimerization and activation, the FGF receptor autoinhibition mechanism appears to be a more general one.

#### VI. Uses of the Crystals and Atomic Structure Coordinates

The crystals of the invention, and particularly the atomic structure coordinates obtained therefrom, have a wide variety of uses. For example, the crystals described herein can be used as a starting material in any of the art-known methods of use for receptor and non-receptor tyrosine kinases. Such methods of use include, for example, identifying molecules that bind to the native or mutated catalytic domain of tyrosine kinases. The crystals and structure coordinates are particularly useful for identifying compounds that inhibit receptor and non-receptor tyrosine kinases as an approach towards developing new therapeutic agents (see, e.g., Levitzki and Gazit, 1995).

The structure coordinates described herein can be used as phasing models for determining the crystal structures of additional native or mutated tyrosine kinase domains, as well as the structures of co-crystals of such domains with ligands such as inhibitors, agonists, antagonists, and other molecules. The

structure coordinates, as well as models of the three-dimensional structures obtained therefrom, can also be used to aid the elucidation of solution-based structures of native or mutated tyrosine kinase domains, such as those obtained via NMR. Thus, the crystals and atomic structure coordinates of the invention provide a convenient means for elucidating the structures and functions of receptor and non-receptor tyrosine kinases.

For purposes of clarity and discussion, the crystals of the invention will be described by reference to specific FGFR1 exemplary crystals. Those skilled in the art will appreciate that the principles described herein are generally applicable to crystals of the tyrosine kinase domain of any cytoplasmic tyrosine kinase that undergoes ligand-induced dimerization or receptor tyrosine kinase, including but not limited to the tyrosine kinases of FIG. 6.

#### VII. Structure Determination for PTKs with Unknown Structure Using Structural Coordinates

Structural coordinates, such as those set forth in Table 1, Table 2, Table 3, and Table 4, can be used to determine the three dimensional structures of PTKs with unknown structure. The methods described below can apply structural coordinates of a polypeptide with known structure to another data set, such as an amino acid sequence, X-ray crystallographic diffraction data, or nuclear magnetic resonance (NMR) data. Preferred embodiments of the invention relate to determining the three dimensional structures of PTKs and related polypeptides. These include receptor PTKs such as FGF-

R, PDGF-R, KDR, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK. Non-receptor PTKs such as SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK can also be used in the methods described  
5 herein.

#### Structures Using Amino Acid Homology

Homology modeling is a method of applying structural coordinates of a polypeptide of known  
10 structure to the amino acid sequence of a polypeptide of unknown structure. This method is accomplished using a computer representation of the three dimensional structure of a polypeptide or polypeptide complex, the computer representation of amino acid sequences of the  
15 polypeptides with known and unknown structures, and standard computer representations of the structures of amino acids. Homology modeling comprises the steps of (a) aligning the amino acid sequences of the polypeptides with and without known structure; (b)  
20 transferring the coordinates of the conserved amino acids in the known structure to the corresponding amino acids of the polypeptide of unknown structure; refining the subsequent three dimensional structure; and (d) constructing structures of the rest of the polypeptide.  
25 One skilled in the art recognizes that conserved amino acids between two proteins can be determined from the sequence alignment step in step (a).

The above method is well known to those skilled in the art. Greer, 1985, *Science* 228, 1055. Blundell et  
30 al., 1988, *Eur. J. Biochem.* 172, 513. A computer program currently utilized for homology modeling by



those skilled in the art is the Homology module in the Insight II modeling package distributed by Molecular Simulations Inc.

Alignment of the amino acid sequence is  
5 accomplished by first placing the computer  
representation of the amino acid sequence of a  
polypeptide with known structure above the amino acid  
sequence of the polypeptide of unknown structure. Amino  
acids in the sequences are then compared and groups of  
10 amino acids that are homologous (e.g., amino acid side  
chains that are similar in chemical nature - aliphatic,  
aromatic, polar, or charged) are grouped together. This  
method will detect conserved regions of the polypeptides  
and account for amino acid insertions or deletions.

15 Once the amino acid sequences of the polypeptides  
with known and unknown structures are aligned, the  
structures of the conserved amino acids in the computer  
representation of the polypeptide with known structure  
are transferred to the corresponding amino acids of the  
20 polypeptide whose structure is unknown. For example, a  
tyrosine in the amino acid sequence of known structure  
may be replaced by a phenylalanine, the corresponding  
homologous amino acid in the amino acid sequence of  
unknown structure.

25 The structures of amino acids located in non-  
conserved regions are to be assigned manually by either  
using standard peptide geometries or molecular  
simulation techniques, such as molecular dynamics. The  
final step in the process is accomplished by refining  
30 the entire structure using molecular dynamics and/or  
energy minimization.

The homology modeling method is well known to those skilled in the art and has been practiced using different protein molecules. The three dimensional structure of the polypeptide corresponding to the catalytic domain of a serine/threonine protein kinase, myosin light chain protein kinase, was homology modeled from the cAMP-dependent protein kinase catalytic subunit. Knighton et al., 1992, *Science* 258:130-135.

#### 10 Structures Using Molecular Replacement

Molecular replacement is a method of applying the X-ray diffraction data of a polypeptide of known structure to the X-ray diffraction data of a polypeptide of unknown sequence. This method can be utilized to define the phases describing the X-ray diffraction data of a polypeptide of unknown structure when only the amplitudes are known. X-PLOR is a commonly utilized computer software package used for molecular replacement. Brünger, 1992, *Nature* 355:472-475. AMORE is another program used for molecular replacement. Navaza, 1994, *Acta Crystallogr. A* 50:157-163. Preferably, the resulting structure does not exhibit a root-mean-square deviation of more than 3 Å.

A goal of molecular replacement is to align the positions of atoms in the unit cell by matching electron diffraction data from two crystals. A program such as X-PLOR can involve four steps. A first step can be to determine the number of molecules in the unit cell and define the angles between them. A second step can involve rotating the diffraction data to define the orientation of the molecules in the unit cell. A third

step can be to translate the electron density in three dimensions to correctly position the molecules in the unit cell. Once the amplitudes and phases of the X-ray diffraction data is determined, an R-factor can be  
5 calculated by comparing electron diffraction maps calculated experimentally from the reference data set and calculated from the new data set. An R-factor between 30-50% indicates that the orientations of the atoms in the unit cell are reasonably determined by this  
10 method. A fourth step in the process can be to decrease the R-factor to roughly 20% by refining the new electron density map using iterative refinement techniques described herein and known to those of ordinary skill in the art.

15

#### Structures Using NMR Data

Structural coordinates of a polypeptide or polypeptide complex derived from X-ray crystallographic techniques can be applied towards the elucidation of  
20 three dimensional structures of polypeptides from nuclear magnetic resonance (NMR) data. This method is used by those skilled in the art. Wuthrich, 1986, John Wiley and Sons, New York:176-199; Pflugrath et al., 1986, *J. Molecular Biology* 189:383-386; Kline et al.,  
25 1986, *J. Molecular Biology* 189:377-382. While the secondary structure of a polypeptide is often readily determined by utilizing two-dimensional NMR data, the spatial connections between individual pieces of secondary structure are not as readily determinable.  
30 The coordinates defining a three-dimensional structure of a polypeptide derived from X-ray crystallographic

techniques can guide the NMR spectroscopist to an understanding of these spatial interactions between secondary structural elements in a polypeptide of related structure.

5           The knowledge of spatial interactions between secondary structural elements can greatly simplify Nuclear Overhauser Effect (NOE) data from two-dimensional NMR experiments. Additionally, applying the crystallographic coordinates after the determination of  
10 secondary structure by NMR techniques only simplifies the assignment of NOEs relating to particular amino acids in the polypeptide sequence and does not greatly bias the NMR analysis of polypeptide structure. Conversely, using the crystallographic coordinates to  
15 simplify NOE data while determining secondary structure of the polypeptide would bias the NMR analysis of protein structure.

As the analysis of polypeptide structure by NMR methods is a relatively new technique, the use of  
20 structural coordinates defining a PTK structure will most likely be utilized more frequently in the near future. As the method progresses, the three dimensional structure analysis of polypeptides of the same size as a PTK catalytic domain will become more frequent.

25

#### VIII.       Structure-Based Design of Modulators of PTK Function Utilizing Structural Coordinates

Structure-based modulator design and identification methods are powerful techniques that can involve  
30 searches of computer data bases containing a wide variety of potential modulators and chemical functional

groups. The computerized design and identification of modulators is useful as the computer data bases contain more compounds than the chemical libraries, often by an order of magnitude. For reviews of structure-based drug design and identification see Kuntz et al., 1994, *Acc. Chem. Res.* 27:117; Guida, 1994, *Current Opinion in Struc. Biol.* 4: 777; Colman, 1994, *Current Opinion in Struc. Biol.* 4: 868.

The three dimensional structure of a polypeptide defined by structural coordinates can be utilized by these design methods. The structural coordinates of Table 1, Table 2, Table 3, and Table 4 can be utilized by this method. In addition, the three dimensional structures of receptor and non-receptor PTKs determined by the homology, molecular replacement, and NMR techniques described herein can also be applied to modulator design and identification methods. Thus, the structures of receptor PTKs, FGF-R, PDGF-R, FLK, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK, can be utilized by the methods described herein. The structures of non-receptor PTKs, SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK, can also be utilized by the rational modulator design method.

#### Design by Searching Molecular Data Bases

One method of rational modulator design searches for modulators by docking the computer representation of compounds from a data base of molecules. Publicly available data bases include:

- a) ACD from Molecular Designs Limited

- b) NCI from National Cancer Institute
- c) CCDC from Cambridge Crystallographic Data Center
- d) CAST from Chemical Abstract Service
- e) Derwent from Derwent Information Limited
- 5 f) Maybridge from Maybridge Chemical Company LTD
- g) Aldrich from Aldrich Chemical Company
- h) Directory of Natural Products from Chapman & Hall

One such data base (ACD distributed by Molecular Designs  
10 Limited Information Systems) contains, for example,  
200,000 compounds that are synthetically derived or are  
natural products. Methods available to those skilled in  
the art can convert a data set represented in two  
dimensions to one represented in three dimensions.  
15 These methods are enabled by such computer programs as  
CONCORD from Tripos Associates or DB-Converter from  
Molecular Simulations Limited.

Multiple methods of structure-based modulator  
design are known to those in the art. Kuntz et al.,  
20 1982, *J. Mol. Biol.* 162: 269; Kuntz et al., 1994,  
*Acc. Chem. Res.* 27: 117; Meng et al., 1992, *J. Compt.*  
*Chem.* 13: 505; Bohm, 1994, *J. Comp. Aided Molec. Design*  
8: 623.

A computer program widely utilized by those skilled  
25 in the art of rational modulator design is DOCK from the  
University of California in San Francisco. The general  
methods utilized by this computer program and programs  
like it are described in three applications below. More  
detailed information regarding some of these techniques  
30 can be found in the Molecular Simulations User Guide,  
1995.

A typical computer program used for this purpose can comprise the following steps:

- (a) remove the existing compound from the protein;
- (b) dock the structure of another compound into  
5 the active-site using the computer program (such as DOCK) or by interactively moving the compound into the active-site;
- (c) characterize the space between the compound and the active-site atoms;
- 10 (d) search libraries for molecular fragments which (i) can fit into the empty space between the compound and the active-site, and (ii) can be linked to the compound; and
- (e) link the fragments found above to the compound  
15 and evaluate the new modified compound.

Part (c) refers to characterizing the geometry and the complementary interactions formed between the atoms of the active-site and the compounds. A favorable geometric fit is attained when a significant surface  
20 area is shared between the compound and active-site atoms without forming unfavorable steric interactions.

One skilled in the art would note that the method can be performed by skipping parts (d) and (e) and screening a data base of many compounds.

25 Structure-based design and identification of modulators of PTK function can be used in conjunction with assay screening. As large computer data base of compounds (around 10,000 compounds) can be searched in a matter of hours, the computer based method can narrow  
30 the compounds tested as potential modulators of PTK function in cellular assays.

The above descriptions of structure-based modulator design are not all encompassing and other methods are reported in the literature:

- (1) CAVEAT: Bartlett et al., 1989, in "Chemical and Biological Problems in Molecular Recognition", Roberts, S.M.; Ley, S.V.; Campbell, M.M. eds.; Royal Society of Chemistry: Cambridge, ppl82-196.
- (2) FLOG: Miller et al., 1994, *J. Comp. Aided Molec. Design* 8:153.
- (3) PRO Modulator: Clark et al., 1995, *J. Comp. Aided Molec. Design* 9:13.
- (4) MCSS: Miranker and Karplus, 1991, *Proteins: Structure, Function, and Genetics* 11:29.
- (5) AUTODOCK: Goodsell and Olson, 1990, *Proteins: Structure, Function, and Genetics* 8:195.
- (6) GRID: Goodford, 1985, *J. Med. Chem.* 28:849.

Design by Modifying Compounds in Complex with PTKs

Another way of identifying compounds as potential modulators is to modify an existing modulator in the polypeptide active-site. For example, the computer representation of modulators can be modified within the computer representation of a PTK active-site. Detailed instructions for this technique can be found in the Molecular Simulations User Manual, 1995 in LUDI. The computer representation of the modulator is modified by the deletion of a chemical group or groups or by the addition of a chemical group or groups.

Upon each modification to the compound, the atoms of the modified compound and active-site can be shifted in conformation and the distance between the modulator



and the active-site atoms may be scored along with any complimentary interactions formed between the two molecules. Scoring can be complete when a favorable geometric fit and favorable complementary interactions are attained. Compounds that have favorable scores are potential modulators of PTK function.

Design by Modifying the Structure of Compounds that Bind PTKs

A third method of structure-based modulator design is to screen compounds designed by a modulator building or modulator searching computer program. Examples of these types of programs can be found in the Molecular Simulations Package, Catalyst. Descriptions for using this program are documented in the Molecular Simulations User Guide (1995). Other computer programs used in this application are ISIS/HOST, ISIS/BASE, ISIS/DRAW) from Molecular Designs Limited and UNITY from Tripos Associates.

These programs can be operated on the structure of a compound that has been removed from the active-site of the three dimensional structure of a compound-PTK complex. Operating the program on such a compound is preferable since it is in a biologically active conformation.

A modulator construction computer program is a computer program that may be used to replace computer representations of chemical groups in a compound complexed with a PTK with groups from a computer data base. A modulator searching computer program is a computer program that may be used to search computer

representations of compounds from a computer data base that have similar three dimensional structures and similar chemical groups as compound bound to a PTK.

A typical program can operate by using the  
5 following general steps:

(a) map the compounds by chemical features such as by hydrogen bond donors or acceptors, hydrophobic/lipophilic sites, positively ionizable sites, or negatively ionizable sites;

10 (b) add geometric constraints to the mapped features; and

(c) search data bases with the model generated in (b).

Those skilled in the art recognize that for  
15 indolinones, the important chemical features include, but are not limited to, a hydrogen bond donor, a hydrogen bond acceptor, and two hydrophobic points of contact. Those skilled in the art also recognize that not all of the possible chemical features of the  
20 compound need be present in the model of (b). One can use any subset of the model to generate different models for data base searches.

## 25 IX. Organic Synthetic Techniques

The versatility of computer-based modulator design and identification lies in the diversity of structures screened by the computer programs. The computer programs can search data bases that contain 200,000  
30 molecules and can modify modulators already complexed with the enzyme with a wide variety of chemical

functional groups. A consequence of this chemical diversity is that a potential modulator of PTK function may take a chemical form that is not predictable. A wide array of organic synthetic techniques exist in the art to meet the challenge of constructing these potential modulators of PTK function. Many of these organic synthetic methods are described in detail in standard reference sources utilized by those skilled in the art. One example of such a reference is March, 1994, Advanced Organic Chemistry: Reactions, Mechanisms, and Structure, New York, McGraw Hill. Thus, the techniques required to synthesize a potential modulator of PTK function identified by computer-based methods are readily available to those skilled in the art of organic chemical synthesis.

X. Cellular Assays Measuring the Effect of a PTK Modulator in Signal Transduction Pathways

Cellular assays can be used to test the activity of a potential modulator of PTK function as well as diagnose a disease associated with inappropriate PTK activity. A potential modulator of PTK function can be tested for activity *in vitro* by assays that measure the effect of a potential modulator on the autophosphorylation of a particular PTK over-expressed in a cell line. Thus, a modulator that acts as a potent inhibitor of the catalytic domain corresponding to a PTK would decrease the amount of autophosphorylation catalyzed by that PTK. Potential modulators could also be tested for activity in cell growth assays *in vitro* as well as in animal model assays *in vivo*.

In vivo assays are also useful for testing the bioactivity of a potential modulator designed by the methods of the invention.

Materials, methods, and experimental data for these assays are fully described in WO 96/40116 published on December 19, 1996, entitled "Indolinone Compounds for the Treatment of Disease". This application is incorporated herein by reference in its entirety, including all drawings, figures, and tables.

XI. Administration of Modulators of PTK Function as Therapeutics for Disease

Methods of administering compounds to organisms as therapeutics for disease are fully described in WO 96/40116 published on December 19, 1996, entitled "Indolinone Compounds for the Treatment of Disease". This application is incorporated herein by reference in its entirety, including all drawings, figures, and tables.

EXAMPLES

The examples below are non-limiting and are merely representative of various aspects and features of the present invention. The examples provide illustrative methods for obtaining crystalline forms of protein kinase polypeptides, methods for determining three dimensional structures of these protein kinase polypeptides, and methods for identifying modulators of protein kinases using the three dimensional structures of the protein kinases.

EXAMPLE 1: X-ray Crystallographic Structure  
Determination of FGFR1

Polypeptide Synthesis and Isolation

5           A recombinant baculovirus was engineered to encode  
residues 456-765 of human FGFR1. A cleavable N-terminal  
histidine tag was incorporated to aid in protein  
purification. Three amino acid substitutions were  
introduced: Cys-488 to Ala, Cys-584 to Ser and Leu-457  
10       to Val. The two cysteine substitutions were made to  
prevent the formation of disulfide-linked oligomers,  
which occurs for the native protein. The substitution  
Leu-457 to Val introduced a *NcoI* cloning site near Met-  
456. The codon for Tyr-766 (TAC) was changed to a stop  
15       codon (TAG) and a *HindIII*-cloning site was generated  
following this stop codon. These substitutions were  
introduced into the full length human cDNA of FGFR1 in  
m13MPI9 by site-directed mutagenesis according to the  
manufacturer's protocol (Amersham).

20           The resulting construct was digested with *NcoI* and  
*HindIII* and was ligated into appropriately digested  
pBlueBac HistagB (Invitrogen). Transfection of insect  
cells (Sf9) was performed with the BaculoGold  
transfection system according to the manufacturer's  
25       protocol (Pharmingen). Following identification of  
positive plaques, the recombinant baculovirus was  
amplified to high titer ( $5 \times 10^7$  virus particles/ml). Sf9  
cells were grown in 175-cm<sup>2</sup> flasks to a density of  $2 -$   
 $3 \times 10^7$  per flask and infected with recombinant baculovirus  
30       with a multiplicity of infection (MOI) of 10.

After 48 hr, cells were harvested by centrifugation

at 3,000g for 35 min at 4°C and then lysed in 25 mM  
HEPES (pH 7.5), 150 mM NaCl, 10% glycerol, 1.5 mM MgCl<sub>2</sub>,  
1 % Triton X-100, 10 µg/ml aprotonin, 10 µg/ml  
leupeptin, and 1 mM phenylmethanesulfonyl fluoride  
5 (PMSF). Lysates were centrifuged in a Sorval RC 5C  
(Dupont) for 1 hr at 4°C at 40,000g followed by  
ultracentrifugation in an XL-80 (Beckman) at 100,000g  
for 1 hr. After centrifugation, the clarified lysate  
was passed over a Ni<sup>2+</sup>-chelating column (Pharmacia), and  
10 the bound histidine-tagged fusion protein was eluted  
with 100 mM imidazole (pH 7.5). Pooled fractions were  
loaded onto a Mono Q anion exchange column (Pharmacia)  
and eluted with a NaCl gradient from 0 to 500 mM.

The fractions containing the fusion protein were  
15 concentrated in a Centricon-30 (Amicon), and the  
histidine tag was removed by overnight digestion with  
enterokinase (Biozyme) at 20°C. The digestion was  
terminated by the addition of aprotonin, leupeptin,  
PMSF, TPCK, and bovine pancreatic trypsin inhibitor  
20 (BPTI). The cleaved kinase domain was then separated  
from the histidine tag on a Superose 12 size-exclusion  
column (Pharmacia). The eluted kinase domain was  
further purified on a Mono Q column. The purified  
kinase domain was analyzed by N-terminal sequencing and  
25 mass spectrometry. Five amino acids (SAAGT) remained  
from the histidine tag. The predicted molecular mass  
was confirmed by mass spectrometry.

#### Crystal Growth

30 Purified FGFR1 was concentrated to 20-50 mg/ml and  
exchanged into 10 mM Tris-HCl (pH 8.0), 10 mM NaCl, and

2 mM DTT using a Centricon-30. Crystals were grown at 4°C by vapor diffusion in hanging drops containing 2.0 µl of 10 mg/ml protein solution and 2.0 µl of reservoir solution: 16% polyethylene glycol (PEG) 10000, 0.3 M (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 5% ethylene glycol, and 100 mM bis-Tris (pH 6.5).

Crystals of native FGFR1 were soaked in 500 ml stabilizing solution [25% PEG 10000, 0.3 M (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 0.1 M Bis-Tris (pH 6.5), 5% ethylene glycol] containing 3-[(3-(2-carboxyethyl)-4-methylpyrrol-5-yl)methylene]-2-indolinone (1-5 mM) or 3-[4-(4-formylpiperazine-1-yl)-benzylidenyl]-2-indolinone (1 mM) at 4°C for 24 to 48 hours. The final soaking concentration of DMSO was between 1 to 5%. The crystals cracked at higher concentrations of DMSO.

Co-crystals of FGFR1 with the inhibitors could also be obtained by vapor diffusion in hanging drops containing 2.0 µl of 10 mg/ml protein solution and 2.0 µl of reservoir solution containing 1 mM 3-[(3-(2-carboxyethyl)-4-methylpyrrol-5-yl)methylene]-2-indolinone and 3-[4-(4-formylpiperazine-1-yl)-benzylidenyl]-2-indolinone.

Co-crystals of FGFR1 complexed with AMP-PCP were obtained as described for the creation of native crystals, except that the protein solution additionally contained 10 mM AMP-PCP and 20 mM MgCl<sub>2</sub>.

#### Preparation Of Heavy Atom Derivative Crystals

Heavy atom derivative crystals were obtained by soaking FGFR1 native crystals (C2-A form) in a solution containing ethylmercurithiosalicylic acid (thimerosal),

KAu(CN)<sub>2</sub> or 4-chloromercuribenzoic acid, as provided in Table 1, *infra*, and containing 25% PEG 10000, 0.3M (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 5% ethylene glycol or glycerol, and 100 mM bis-Tris (pH 6.5), and were flash-cooled either in  
5 liquid nitrogen directly (Synchrotron) or in a dry nitrogen stream at -175°C (rotating anode).

#### Data Collection and Structure Determination

For native crystals and crystals comprising the  
10 nucleotide analog AMP-PCP, data were collected either on a Rigaku RU-200 rotating anode operated at 50 kV and 100 mA (Cu K $\alpha$ ) and equipped with double-focusing mirrors and an R-AXIS IIC image plate detector, or at beamline X-4A at the National Synchrotron Light Source, Brookhaven  
15 National Laboratory. Synchrotron data ( $\lambda=1.07\text{\AA}$ ) were collected on Fuji image plates and read with a Fuji scanner. One cryo-cooled crystal was used for each of the data sets. To obtain cryo-cooled crystals, crystals were soaked in a cryo-protectant solution containing 25%  
20 PEG 10000, 0.3 M (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 5% ethylene glycol or glycerol and 100 mM bis-Tris (pH 6.5), and were flash-cooled either in liquid nitrogen directly (synchrotron data) or in a dry nitrogen stream at -175°C (rotating anode data). All data were processed using DENZO and  
25 SCALEPACK. Otwinowski, 1993, "Oscillation data reduction program," Proceedings of the CCP4 Study Weekend, Sawyer et al., eds. (Daresbury, United Kingdom: SERC Daresbury Laboratory), 56-62.

For native crystals and crystals comprising the  
30 nucleotide analog AMP-PCP, a molecular replacement solution was found initially for the C2-B crystal form



using an IRK search model that consisted of polyalanine with the common side chains for residues 993-1263 (FGFR1 residues 475-754), excluding residues 1094-1105 (kinase insert) and 1153-1170 (activation loop). With AMORE (Navaza, 1994, *AmoRe: an automated package for molecular replacement*, *Acta Crystallogr. A* 50: 157-163), using 80% of the structure factor amplitudes between 15.0 and 3.5 Å, one of the two molecules in the asymmetric unit was located. The correlation coefficient (c.c.) for the correct 1-molecule solution was 0.23 (versus 0.20 for the highest incorrect solution). This molecule was rigid body-refined in X-PLOR (Brünger, 1992, X-PLOR (Version 3.1) Manual (New Haven, Connecticut: The Howard Hughes Medical Institute and Department of Molecular Biophysics and Biochemistry, Yale University)), first as one rigid body unit, then as two units each comprising a lobe of the kinase. Rigid body refinement (12.0-3.5 Å,  $F > 3\sigma$ ) resulted in a relative rotation of the two lobes of  $\sim 10^\circ$  and an increase of the c.c. from 0.20 to 0.25. The rigid body-refined molecule was then used as a new search model in AMORE, and this time both molecules in the asymmetric unit were located. The c.c. for the correct 2-molecule solution was 0.35 (versus 0.27 for the highest incorrect solution).

Multiple cycles of model building and refinement against 6.0-2.4 Å data resulted in the addition to the model of many of the side chains and some of the missing polypeptide chain. Model building was performed using TOM/FRODO (Jones, 1985, "Diffraction methods for biological macromolecules. Interactive computer graphics: FRODO," *Methods in Enzymology* 115: 157-171)

and conjugate-gradient minimization and simulated annealing were performed using X-PLOR. Brünger, *supra*. At this stage, the R-value was 30% (free R-value of 36%). To help expedite model building and refinement, experimental phases were obtained. Because crystals grown in the presence of ethylene glycol were easier to manipulate than those grown in glycerol, several heavy-atom derivative data sets were collected from C2-A crystals that had been soaked in various heavy atom solutions. The C2-B structure was subsequently refined against 6.0-2.4 Å data to an R-value of 23.8% (free R-value of 30.4%) with r.m.s.d. values of 0.008 Å for bond distances and 1.4° for bond angles.

Molecular replacement was used to locate the two FGFR1 molecules (designated FLGK-A and FLGK-B) in the asymmetric unit of the C2-A crystal form. Using AMORE with 80% of structure factor amplitudes between 15.0 and 3.5 Å and the C2-B model, the c.c. for the correct 2-molecule solution was 0.62 (versus 0.35 for the highest incorrect solution). Heavy atom positions were determined from difference Fourier maps using the calculated phases from the partial model. Refinement of heavy atom parameters and phase determination were performed with MLPHARE (Otwinowski, 1991, "Maximum likelihood refinement of heavy atom parameters," *Isomorphous replacement and anomalous Scattering*, Evans and Leslie eds. (Daresbury, United Kingdom: SERC Daresbury Laboratory), 56-62)). An initial molecular isomorphous replacement (MIR)-phased electron density map was calculated with data between 2.0. and 2.8 Å resolution. This map was improved by solvent

flattening, histogram matching, and non-crystallographic symmetry (NCS) averaging using DM (Cowtan, 1994, "Protein Crystallography," CCP4 and ESF-EACBM Newsletter (joint) 31: 34-38).

5           Refinement of the C2-A FGFR1 structure against 6.0-2.0 Å data proceeded by conjugate-gradient minimization and simulated annealing using X-PLOR. Tight NCS restraints were imposed until data to 2.0 Å resolution were included in the refinement, at which point the  
10       restraints were lifted. An overall anisotropic B-value was calculated using X-PLOR and applied to the observed structure factors, reducing the R-value by ~3%. Water molecules whose B-values refined to  $\geq 70$  Å<sup>2</sup> were omitted from the subsequent refinement round. The average B-  
15       value is 37.5 Å<sup>2</sup> for all protein atoms, 35.4 Å<sup>2</sup> for protein atoms in FLGK-A, 39.7 Å<sup>2</sup> for protein atoms in FLGK-B, and 40.2 Å<sup>2</sup> for water molecules. The side chains for Cys-603 in FLGK-A and FLGK-B and for Met-534 in FLGK-B have been modeled in two different conformations.  
20       Residues that are not included in the atomic model due to poor supporting electron density are for FLGK-A: 456-463, 486-490, 501-504, 580-591, 763-765; and for FLG-B: 456-460, 501-504, 578-593, 646-651, 657-659, 762-765.

          The positions of the two AMP-PCP molecules (one per  
25       FGFR1 molecule) were easily identified in  $2F_{\text{obs}(\text{co-complex})} - F_{\text{calc}(\text{FGFR1})}$  difference Fourier maps. The AMP-PCP molecule bound to FLGK-B is less tightly bound and has been modeled with an occupancy of 0.5.

          Table A summarizes the X-ray crystallography data  
30       sets of FGFR1 derivative crystals that were used to determine the structures of crystalline FGFR1 and

crystalline FGFR1:AMP-PCP co-complex of the invention.

TABLE 5

| Data Collection and MIR Phasing Summary |                         |                         |                    |                    |                   |                      |
|---|-------------------------|-------------------------|--------------------|--------------------|-------------------|----------------------|
|   | Native                  | AMP-PCP                 | Thi-1 <sup>a</sup> | Thi-2 <sup>a</sup> | PCMB <sup>a</sup> | KAu(CN) <sub>2</sub> |
| X-ray source                            | X-4A                    | RU-200                  | RU-200             | RU-200             | RU-200            | RU-200               |
| Resolution limit (Å)                    | 2.0                     | 2.3                     | 2.6                | 2.8                | 2.8               | 2.8                  |
| Number of sites                         | —                       | —                       | 4                  | 7                  | 2                 | 2                    |
| Conc. (mM)/time (h)                     | —                       | —                       | 0.1/24             | 0.1/48             | 0.2/2             | 5.0/72               |
| R <sub>sym</sub> <sup>b</sup> (%)       | 4.8(19.7) <sup>c</sup>  | 4.5(23.3) <sup>c</sup>  | 5.5                | 9.8                | 6.8               | 6.8                  |
| Total observations                      | 122569                  | 91324                   | 55456              | 59488              | 67988             | 45303                |
| Unique reflections                      | 50771                   | 31997                   | 42820 <sup>d</sup> | 35538 <sup>d</sup> | 18619             | 18202                |
| Completeness (%)                        | 97.3(96.3) <sup>c</sup> | 95.5(93.7) <sup>c</sup> | 95.0               | 96.7               | 98.0              | 97.7                 |
| Signal (%I>3σ)                          | 80.7(50.3) <sup>c</sup> | 79.6(51.7) <sup>c</sup> | 69.8               | 66.8               | 84.7              | 77.6                 |
| R <sub>iso</sub> <sup>e</sup> (%)       | —                       | —                       | 17.1               | 31.2               | 15.4              | 15.2                 |
| Phasing power <sup>f</sup>              | —                       | —                       | 1.8                | 2.0                | 1.0               | 0.9                  |
| R <sub>critis</sub> <sup>g</sup> (%)    | —                       | —                       | 0.55               | 0.50               | 0.81              | 0.84                 |
| Overall FOM <sup>h</sup>                | 0.60                    |                         |                    |                    |                   |                      |

<sup>a</sup>Thi-1, Thi-2; ethylmercurithiosalicylic acid (thimerosal); PCMB: 4-chloromercuribenzoic acid.

<sup>b</sup>R<sub>sym</sub> = 100 x  $\sum_i |I_i(h) - \langle I(h) \rangle| / \sum_i I_i(h)$

<sup>c</sup>Value in parentheses is for the highest resolution shell.

<sup>d</sup>I(+h) and I(-h) processed as independent reflections. Anomalous scattering contributions were included.

<sup>e</sup>R<sub>iso</sub> = 100 x  $\sum_h ||F_p(h) \pm F_p(h)| - |F_{PH}(h)|| / \sum_h |F_p(h)|$ , where F<sub>p</sub> and F<sub>PH</sub> are the native and derivative structure factors, respectively.

<sup>f</sup>Phasing power: r.m.s. heavy atom structure factor / r.m.s. lack of closure (for acentric reflections from 20.0 to 2.8 Å).

<sup>g</sup>R<sub>critis</sub> = 100 x  $\sum_h ||F_{PH}(h)| - F_{I(calc)}(h)| / \sum_h |F_{PH}(h) \pm F_p(h)|$  (for centric reflections from 20.0 to 2.8 Å).

<sup>h</sup>Figure of merit:  $\int P(\phi) \exp(i\phi) d\phi / \int P(\phi) d(\phi)$ , where P is the probability distribution of the phase angle  $\phi$ .

For crystals comprising FGFR1 and compounds 1 and 2, data were collected on a Rigaku RU-200 rotating anode (Cu K $\alpha$ ) operating at 50 kV and 100 mA and equipped with double-focusing mirrors and an R-Axis IIC image plate detector. One cryo-cooled crystal was used for each of the data sets. Crystals were soaked in a cryo-protectant [25% PEG 10000, 0.3 M (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 5% ethylene glycol, 100 mM bis-Tris (pH 6.5), and 1 mM: 3-[(3-(2-carboxyethyl)-4-methylpyrrol-5-yl)methylene]-2-indolinone (hereafter referred to as compound 1) or 3-[4-(4-formylpiperazine-1-yl)-benzylidenyl]-2-indolinone (hereafter referred to as compound 2) and flash-cooled in a dry nitrogen stream at -175°C. Data were processed using DENZO and SCALEPACK. Otwinowski, 1993, *Proceedings of the CCP4 Study Weekend* (Daresbury, United Kingdom: SERC Daresbury Laboratory) pp 56-62.

A summary of the data collection parameters are included in the following Table 6:

TABLE 6

|            | Resolution limit (Å) | Observations (N) | Completeness (%) | Redundancy | R <sub>sym</sub> <sup>a</sup> (%) | Signal (I > $\sigma$ I) |
|------------|----------------------|------------------|------------------|------------|-----------------------------------|-------------------------|
| compound 1 | 2.5                  | 93535            | 97.6 (96.1)      | 2.7        | 6.8 (23.0)                        | 11.8                    |
| compound 2 | 2.4                  | 94093            | 99.1 (97.9)      | 3.3        | 6.3 (32.2)                        | 11.4                    |

compound 1 structure: 550 residues, 252 water molecules, 2 compound 1 molecules (4589 atoms)

compound 2 structure: 550 residues, 248 water molecules, 2 compound 2 molecules (4646 atoms)

### Structure Analyses

Atomic superpositions were performed with TOSS

(Hendrickson, 1979). Per residue solvent accessible surface calculations were done with X-PLOR. The surface area buried in a dimer interface was calculated with GRASP (Nicholls et al., 1991) using a probe radius of 1.4 Å. The stereochemical quality of the atomic model was monitored using PROCHECK (Laskowski et al., 1993, PROCHECK: a computer program to check the stereochemical quality of protein structures," *J. Appl. Cryst.* 26: 283-291). As defined in PROCHECK, 93% of the residues in the model have main-chain torsion angles in the most favored Ramachandran regions. There are no residues in disallowed regions, and three residues in generously allowed regions: Arg-622 in FLGK-A and FLGK-B and Arg-554 in FLGK-A. The overall G-factor score is 0.42.

Table 7 summarizes the X-ray crystallography refinement parameters of the structures of crystalline FGFR1 and crystalline FGFR1:AMP-PCP co-complex of the invention. Table 8 summarizes the X-ray crystallography refinement parameters for the FGFR1/compound complexes.

TABLE 7

| Refinement Parameters  |                   |                        |                             |           |            |  |
|--|-------------------|------------------------|-----------------------------|-----------|------------|--|
| FGFR1: 550 residues, 252 water molecules (4589 atoms)                              |                   |                        |                             |           |            |  |
| FGFR1:AMP-PCP: 550 residues, 238 water molecules, 2 AMP-PCP molecules (4638 atoms) |                   |                        |                             |           |            |  |
| Model  | d-spacings<br>(Å) | Reflection<br>s<br>(N) | R-value <sup>a</sup><br>(%) | bonds (Å) | angles (°) | B-values <sup>b</sup><br>(Å <sup>2</sup> ) |
| FGFR1:   | 6.0-2.0           | 42548                  | 21.3 (26.2) <sup>c</sup>    | 0.008     | 1.3        | 1.6  |
| FGFR1:AMP-PCP:   | 6.0-2.3           | 26729                  | 20.1 (27.5) <sup>c</sup>    | 0.009     | 1.4        | 1.7  |

<sup>a</sup>R-value =  $100 \times \sum_h ||F_{\text{obs}}(h)| - |F_{\text{calc}}(h)|| / \sum_h |F_{\text{obs}}(h)|$  for reflections with  $F_{\text{obs}} > 2\sigma$ .

<sup>b</sup>For bonded protein atoms.

<sup>c</sup>Value in parentheses is the free R-value (Brünger, 1993) determined from 5% of the data.

TABLE 8

| Model         | d-spacings (Å) | Reflec-<br>tions | R-<br>value <sup>c</sup> (N) | bonds (Å) | angles (°) | B-<br>values <sup>c</sup><br>(Å <sup>2</sup> ) |
|---------------|----------------|------------------|------------------------------|-----------|------------|--|
| compound<br>1 | 6.0-2.4        | 42548            | 19.7<br>(27.0) <sup>k</sup>  | 0.008     | 1.3        | 1.6  |
| compound<br>2 | 6.0-2.5        | 26729            | 20.0<br>(28.0) <sup>k</sup>  | 0.008     | 1.4        | 1.7  |

$$^a R_{\text{sym}} = 100 \times S_h S_i |I_i(h) - I_i(h)^o| / S_h S_i I_i(h)$$

<sup>a</sup>Value in parentheses is for the highest resolution shell.

<sup>b</sup>R-value =  $100 \times S_h \sum |F_o(h) - F_c(h)| / S_h \sum |F_o(h)|$ , where  $F_o$  and  $F_c$  are the observed and calculated structure factors, respectively ( $F_o > 2s$ ).

<sup>b</sup>For bonded protein atoms.

<sup>c</sup>Value in parentheses is the free R-value determined from 5% of the data.

### Atomic Structural Coordinates

Tables 1 and 2 provide the atomic structural coordinates of unphosphorylated FGFR1 and unphosphorylated FGFR1:AMP-PCP co-complex, respectively. In the Tables, coordinates for both of the FGFR1 molecules of the dimer comprising the asymmetric unit are provided. The amino acid residue numbers coincide with those used in FIG. 3. In the first FGFR1 molecule of the dimer the residue number is preceded by a 1, i.e., residue number 464 of the first FGFR1 molecule of the dimer is denoted by "1464". Tables 3 and 4 provide the atomic structural coordinates of FGFR1 in complex with indolinone compounds found to inhibit FGFR1 function.

The following abbreviations are used in the Tables:

"Atom Type" refers to the element whose coordinates are provided. The first letter in the column defines the element.

5        "A.A." refers to amino acid.

      "X, Y and Z" provide the Cartesian coordinates of the element.

      "B" is a thermal factor that measures movement of the atom around its atomic center.

10       "OCC" refers to occupancy, and represents the percentage of time the atom type occupies the particular coordinate. OCC values range from 0 to 1, with 1 being 100%.

      "PRT1" or "PRT2" relate to occupancy, with PRT1  
15       designating the coordinates of the atom when in the first conformation and PRT2 designating the coordinates of the atom when in the second or alternate conformation.

      Structural coordinates for FGFR1 may be modified by  
20       mathematical manipulation. Such manipulations include, but are not limited to, crystallographic permutations of the raw structure coordinates, fractionalization of the raw structure coordinates, integer additions or  
      subtractions to sets of the raw structure coordinates,  
25       inversion of the raw structure coordinates and any combination of the above.

      In addition, the structural coordinates can be slightly modified and still render nearly identical three dimensional structures. Therefore, a measure of a  
30       unique set of structural coordinates is the root-mean-square deviation of the resulting structure. Structural



coordinates that render three dimensional structures that deviate from one another by a root-mean-square deviation of less than 1.5 Å may be viewed as identical.

5     EXAMPLE 2:     Computer-Based Design of Modulators of  
                  PTK Function

Potential modulators of PTK function were designed and identified by operating the program Catalyst on the  
10     structure of 3-[(3-(2-carboxyethyl)-4-methylpyrrol-5-yl)methylene]-2-indolinone. The chemical features constraining the search model include a hydrogen bond donor, a hydrogen bond acceptor, and two hydrophobic points of contact. Approximately 40 compounds were  
15     identified as potential modulators of PTK function using this method.

The compounds identified by the method as potential modulators of PTK function were commercially available. These compounds were then tested for their ability to  
20     inhibit the FLK PTK in an enzyme linked immunosorbant assay (ELISA). The method of performing this assay is taught in WO 96/40116, entitled "Indolinone Compounds for the Treatment of Disease," published on December 19, 1996, invented by Tang et al., incorporated by reference  
25     herein in its entirety, including all figures, drawings, and tables. Flk-1 specific antibodies can be prepared from the following protocol:

1.     Prepare a Tresyl-Activated Agarose/Flk-1-D column  
30     by incubating 10 ml of Tresyl-Activated Agarose with 20 mg of purified GST-Flk-1-D fusion protein

in 100mM sodium bicarbonate (pH 9.6) buffer  
overnight at 4°C.

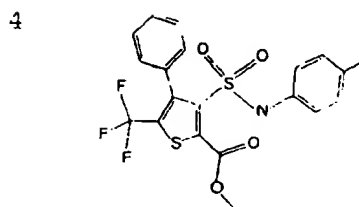
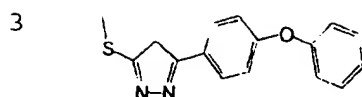
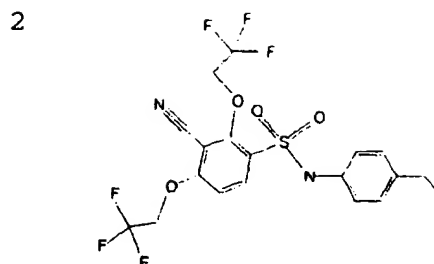
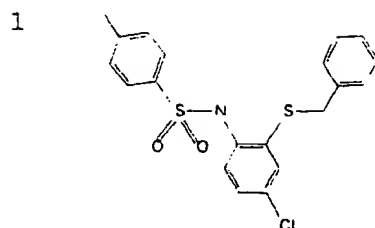
2. Wash the column once with PBS.
3. Block the excess sites on the column with 2 M  
5 glycine for 2 hours at 4°C.
4. Wash the column with PBS.
5. Incubate the column with Rabbit anti-Flk-1D  
production bleed for 2 hours at 4°C.
6. Wash the column with PBS.
- 10 7. Elute antiserum with 100 mM Citric Acid, pH3.0 and  
neutralize the eluate immediately with 2 M Tris, pH  
9.0.
8. Dialyze the eluate against PBS overnight at 4°C  
with 3 changes of buffer (sample to buffer ratio is  
15 1:100).
9. Adjust the dialyzed antiserum to 5% glycerol and  
store at -80°C in small aliquotes.

The Flk-1 ELISA can include a 2,2-azino-bis(3-  
20 ethylbenz-thiazoline-6-sulfonic acid (ABTS) solution,  
which can comprise 100mM citric acid (anhydrous), 250 mM  
Na<sub>2</sub>HPO<sub>4</sub> (pH 4.0), 0.5 mg/ml ABTS (Sigma catalog no. A-  
1888). The solution is most appropriately stored in  
dark at 4°C until ready for use.

25 The FLK-1 specific antibodies can also be purchased  
from Santa Cruz Biotechnology (Catalog No. SC-504).

Four of the forty compounds identified as potential  
modulators of PTK function were potent modulators of FLK  
function. These molecules have the following  
30 structures:

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The modulators inhibit the FLK protein kinase with the following  $IC_{50}$  values:

5

TABLE 9

| Compound | FLK kinase<br>$IC_{50}$<br>( $\mu M$ )<br>compounds<br>tested at 100 $\mu M$ | FLK kinase<br>$IC_{50}$<br>( $\mu M$ )<br>compounds<br>tested at 20 $\mu M$ | EGFR<br>$IC_{50}$<br>( $\mu M$ ) | IGF-1R<br>$IC_{50}$<br>( $\mu M$ ) |
|----------|--|---|----------------------------------|------------------------------------|
| 1        | 14.8   | 14  | >100                             | >100                               |
| 2        | 15.7   | 10.6  | >100                             | >100                               |
| 3        | 21.4   | 16.6  | 68                               | 30.9                               |
| 4        | 22.9   | 16.4  | >100                             | >100                               |

10

The invention illustratively described herein may be practiced in the absence of any element or elements, limitation or limitations which is not specifically disclosed herein. The terms and expressions which have

15

been employed are used as terms of description and not of limitation, and there is no intention that in the use of such terms and expressions of excluding any equivalents of the features shown and described or portions thereof, but it is recognized that various modifications are possible within the scope of the invention claimed. Thus, it should be understood that although the present invention has been specifically disclosed by preferred embodiments and optional features, modification and variation of the concepts herein disclosed may be resorted to by those skilled in the art, and that such modifications and variations are considered to be within the scope of this invention as defined by the appended claims.

Those references not previously incorporated herein by reference, including both patent and non-patent references, are expressly incorporated herein by reference for all purposes. Other embodiments are within the following claims.

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SEQUENCE LISTING

## (1) GENERAL INFORMATION:

(i) APPLICANT: SUGEN, INCORPORATED  
351 Galveston Drive  
Redwood City, CA 94063

(ii) TITLE OF INVENTION: CRYSTAL STRUCTURES OF A  
PROTEIN TYROSINE KINASE

(iii) NUMBER OF SEQUENCES: 5

## (iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Lyon & Lyon  
(B) STREET: 633 West Fifth Street  
Suite 4700  
(C) CITY: Los Angeles  
(D) STATE: California  
(E) COUNTRY: U.S.A.  
(F) ZIP: 90071-2066

## (v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: 3.5" Diskette, 1.44 Mb  
storage  
(B) COMPUTER: IBM Compatible  
(C) OPERATING SYSTEM: IBM P.C. DOS 5.0  
(D) SOFTWARE: FastSEQ for Windows 2.0

## (vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: To Be Assigned  
(B) FILING DATE: Herewith  
(C) CLASSIFICATION:

## (vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER:  
(B) FILING DATE:

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## (viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Warburg, Richard J.  
 (B) REGISTRATION NUMBER: 32,327  
 (C) REFERENCE/DOCKET NUMBER: 227/088-PCT

## (ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (213) 489-1600  
 (B) TELEFAX: (213) 955-0440  
 (C) TELEX: 67-3510

## (2) INFORMATION FOR SEQ ID NO:1:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 310 amino acids  
 (B) TYPE: amino acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL: NO

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

```

Met Leu Ala Gly Val Ser Glu Tyr Glu Leu Pro Glu Asp Pro Arg Trp
1           5           10           15

Glu Leu Pro Arg Asp Arg Leu Val Leu Gly Lys Pro Leu Gly Glu Gly
20           25           30

Cys Phe Gly Gln Val Val Leu Ala Glu Ala Ile Gly Leu Asp Lys Asp
35           40           45

Lys Pro Asn Arg Val Thr Lys Val Ala Val Lys Met Leu Lys Ser Asp
50           55           60

Ala Thr Glu Lys Asp Leu Ser Asp Leu Ile Ser Glu Met Glu Met Met
65           70           75           80

Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn Leu Leu Gly Ala Cys
85           90           95

Thr Gln Asp Gly Pro Leu Tyr Val Ile Val Glu Tyr Ala Ser Lys Gly
100          105          110

Asn Leu Arg Glu Tyr Leu Gln Ala Arg Arg Pro Pro Gly Leu Glu Tyr
115          120          125

Cys Tyr Asn Pro Ser His Asn Pro Glu Glu Gln Leu Ser Ser Lys Asp
130          135          140

```

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Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly Met Glu Tyr Leu Ala  
 145 150 155 160  
 Ser Lys Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val  
 165 170 175  
 Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg Asp  
 180 185 190  
 Ile His His Ile Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu Pro  
 195 200 205  
 Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Ile Tyr Thr His  
 210 215 220  
 Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe Thr  
 225 230 235 240  
 Leu Gly Gly Ser Pro Tyr Pro Gly Val Pro Val Glu Glu Leu Phe Lys  
 245 250 255  
 Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro Ser Asn Cys Thr Asn  
 260 265 270  
 Glu Leu Tyr Met Met Met Arg Asp Cys Trp His Ala Val Pro Ser Gln  
 275 280 285  
 Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Ile Val Ala  
 290 295 300  
 Leu Thr Ser Asn Gln Glu  
 305 310

## (2) INFORMATION FOR SEQ ID NO:2:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 315 amino acids  
 (B) TYPE: amino acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL: NO

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Ser Ala Ala Gly Thr Met Val Ala Gly Val Ser Glu Tyr Glu Leu Pro  
 1 5 10 15  
 Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu Gly Lys  
 20 25 30

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Pro Leu Gly Glu Gly Ala Phe Gly Gln Val Val Leu Ala Glu Ala Ile  
 35 40 45

Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala Val Lys  
 50 55 60

Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu Ile Ser  
 65 70 75 80

Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn  
 85 90 95

Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile Val Glu  
 100 105 110

Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg Arg Pro  
 115 120 125

Pro Gly Leu Glu Tyr Ser Tyr Asn Pro Ser His Asn Pro Glu Glu Gln  
 130 135 140

Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly  
 145 150 155 160

Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu Ala Ala  
 165 170 175

Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe  
 180 185 190

Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys Thr Thr  
 195 200 205

Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp  
 210 215 220

Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu  
 225 230 235 240

Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val Pro Val  
 245 250 255

Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro  
 260 265 270

Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys Trp His  
 275 280 285

Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu  
 290 295 300

Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu  
 305 310 315



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## (2) INFORMATION FOR SEQ ID NO:3:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 351 amino acids  
 (B) TYPE: amino acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL: NO

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

```

Met Arg Gly Ser His His His His His Gly Met Ala Ser Met Thr
 1           5           10           15

Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Lys Asp
      20           25           30

Pro Ser Ser Arg Ser Ala Ala Gly Thr Met Val Ala Gly Val Ser Glu
      35           40           45

Tyr Glu Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu
 50           55           60

Val Leu Gly Lys Pro Leu Gly Glu Gly Ala Phe Gly Gln Val Val Leu
 65           70           75           80

Ala Glu Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys
      85           90           95

Val Ala Val Lys Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser
     100           105           110

Asp Leu Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys
     115           120           125

Asn Ile Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr
     130           135           140

Val Ile Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln
     145           150           155           160

Ala Arg Arg Pro Pro Gly Leu Glu Tyr Ser Tyr Asn Pro Ser His Asn
     165           170           175

Pro Glu Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln
     180           185           190

Val Ala Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg
     195           200           205

```

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Asp Leu Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys  
 210 215 220  
 Ile Ala Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr  
 225 230 235 240  
 Lys Lys Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu  
 245 250 255  
 Ala Leu Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe  
 260 265 270  
 Gly Val Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro  
 275 280 285  
 Gly Val Pro Val Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg  
 290 295 300  
 Met Asp Lys Pro Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg  
 305 310 315 320  
 Asp Cys Trp His Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu  
 325 330 335  
 Val Glu Asp Leu Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu  
 340 345 350

## (2) INFORMATION FOR SEQ ID NO:4:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 933 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA to mRNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

ATGCTAGCAG GGGTCTCTGA GTATGAGCTT CCCGAAGACC CTCGCTGGGA GCTGCCTCGG 60  
 GACAGACTGG TCTTAGGCAA ACCCCTGGGA GAGGGCTGCT TTGGGCAGGT GGTGTTGGCA 120  
 GAGGCTATCG GGCTGGACAA GGACAAACCC AACCGTGTGA CCAAAGTGGC TGTGAAGATG 180  
 TTGAAGTCGG ACGCAACAGA GAAAGACTTG TCAGACCTGA TCTCAGAAAT GGAGATGATG 240  
 AAGATGATCG GGAAGCATAA GAATATCATC AACCTGCTGG GGGCCTGCAC GCAGGATGGT 300  
 CCCTTGATG TCATCGTGGA GTATGCCTCC AAGGGCAACC TCGGGGAGTA CCTGCAGGCC 360  
 CGGAGGCCCC CAGGGCTGGA ATACTGCTAC AACCCAGCC ACAACCCAGA GGAGCAGCTC 420

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|   |     |
|---|-----|
| TCCTCCAAGG ACCTGGTGTC CTGCGCCTAC CAGGTGGCCC GAGGCATGGA GTATCTGGCC | 480 |
| TCCAAGAAGT GCATACACCG AGACCTGGCA GCCAGGAATG TCCTGGTGAC AGAGGACAAT | 540 |
| GTGATGAAGA TAGCAGACTT TGGCCTCGCA CGGGACATTC ACCACATCGA CTACTATAAA | 600 |
| AAGACAACCA ACGGCCGACT GCCTGTGAAG TGGATGGCAC CCGAGGCATT ATTTGACCGG | 660 |
| ATCTACACCC ACCAGAGTGA TGTGTGGTCT TTCGGGGTGC TCCTGTGGGA GATCTTCACT | 720 |
| CTGGGCGGCT CCCCATACCC CGGTGTGCCT GTGGAGGAAC TTTTCAAGCT GCTGAAGGAG | 780 |
| GGTCACCGCA TGGACAAGCC CAGTAACTGC ACCAACGAGC TGTACATGAT GATGCGGGAC | 840 |
| TGCTGGCATG CAGTGCCCTC ACAGAGACCC ACCTTCAAGC AGCTGGTGGA AGACCTGGAC | 900 |
| CGCATCGTGG CTTTGACCTC CAACCAGGAG TAG                              | 933 |

## (2) INFORMATION FOR SEQ ID NO:5:

## (i) SEQUENCE CHARACTERISTICS:

|                   |                 |
|-------------------|-----------------|
| (A) LENGTH:       | 1056 base pairs |
| (B) TYPE:         | nucleic acid    |
| (C) STRANDEDNESS: | double          |
| (D) TOPOLOGY:     | linear          |

(ii) MOLECULE TYPE: cDNA

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

|   |     |
|---|-----|
| ATGCGGGGTT CTCATCATCA TCATCATCAT GGTATGGCTA GCATGACTGG TGGACAGCAA | 60  |
| ATGGGTCGGG ATCTGTACGA CGATGACGAT AAGGATCCGA GCTCGAGATC TGCAGCTGGT | 120 |
| ACCATGGTAG CAGGGGTCTC TGAGTATGAG CTTCCCGAAG ACCCTCGCTG GGAGCTGCCT | 180 |
| CGGGACAGAC TGGTCTTAGG CAAACCCCTG GGAGAGGGCG CCTTTGGGCA GGTGGTGTGG | 240 |
| GCAGAGGCTA TCGGGCTGGA CAAGGACAAA CCCAACCGTG TGACCAAAGT GGCTGTGAAG | 300 |
| ATGTTGAAGT CGGACGCAAC AGAGAAAGAC TTGTCAGACC TGATCTCAGA AATGGAGATG | 360 |
| ATGAAGATGA TCGGGAAGCA TAAGAATATC ATCAACCTGC TGGGGGCCTG CACGCAGGAT | 420 |
| GGTCCCTTGT ATGTCATCGT GGAGTATGCC TCCAAGGGCA ACCTGCGGGA GTACCTGCAG | 480 |
| GCCCGGAGGC CCCAGGGCT GGAATACTCC TACAACCCCA GCCACAACCC AGAGGAGCAG  | 540 |
| CTCTCCTCCA AGGACCTGGT GTCCTGCGCC TACCAGGTGG CCCGAGGCAT GGAGTATCTG | 600 |
| GCCTCCAAGA AGTGCATACA CCGAGACCTG GCAGCCAGGA ATGTCCTGGT GACAGAGGAC | 660 |

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|  |      |
|--|------|
| AATGTGATGA AGATAGCAGA CTTTGGCCTC GCACGGGACA TTCACCACAT CGACTACTAT  | 720  |
| AAAAAGACAA CCAACGGCCG ACTGCCTGTG AAGTGGATGG CACCCGAGGC ATTATTTGAC  | 780  |
| CGGATCTACA CCCACCAGAG TGATGTGTGG TCTTTCGGGG TGCTCCTGTG GGAGATCTTC  | 840  |
| ACTCTGGGCG GCTCCCCATA CCCCAGGTGTG CCTGTGGAGG AACTTTTCAA GCTGCTGAAG | 900  |
| GAGGGTCACC GCATGGACAA GCCCAGTAAC TGCACCAACG AGCTGTACAT GATGATGCGG  | 960  |
| GACTGCTGGC ATGCAGTGCC CTCACAGAGA CCCACCTTCA AGCAGCTGGT GGAAGACCTG  | 1020 |
| GACCGCATCG TGGCCTTGAC CTCCAACCAG GAGTAG                            | 1056 |

TABLE 1

| Atom<br>No. | Atom<br>Type | A.A | A.A<br>No. | X       | Y      | Z      | OCC  | B     |
|-------------|--------------|-----|------------|---------|--------|--------|------|-------|
| ATOM 1      | N            | GLU | 1464       | -13.639 | 16.975 | 8.571  | 1.00 | 54.29 |
| ATOM 3      | CA           | GLU | 1464       | -12.479 | 17.105 | 7.695  | 1.00 | 52.62 |
| ATOM 4      | CB           | GLU | 1464       | -11.400 | 17.974 | 8.349  | 1.00 | 54.64 |
| ATOM 5      | C            | GLU | 1464       | -11.914 | 15.738 | 7.319  | 1.00 | 49.74 |
| ATOM 6      | O            | GLU | 1464       | -11.845 | 15.407 | 6.136  | 1.00 | 52.04 |
| ATOM 7      | N            | LEU | 1465       | -11.562 | 14.925 | 8.310  | 1.00 | 44.95 |
| ATOM 9      | CA           | LEU | 1465       | -11.018 | 13.599 | 8.037  | 1.00 | 41.04 |
| ATOM 10     | CB           | LEU | 1465       | -10.236 | 13.066 | 9.235  | 1.00 | 40.18 |
| ATOM 11     | CG           | LEU | 1465       | -8.719  | 13.196 | 9.130  | 1.00 | 43.70 |
| ATOM 12     | CD1          | LEU | 1465       | -8.346  | 14.654 | 8.891  | 1.00 | 46.74 |
| ATOM 13     | CD2          | LEU | 1465       | -8.061  | 12.671 | 10.395 | 1.00 | 40.72 |
| ATOM 14     | C            | LEU | 1465       | -12.092 | 12.594 | 7.656  | 1.00 | 39.18 |
| ATOM 15     | O            | LEU | 1465       | -13.187 | 12.590 | 8.219  | 1.00 | 38.05 |
| ATOM 16     | N            | PRO | 1466       | -11.802 | 11.748 | 6.657  | 1.00 | 37.20 |
| ATOM 17     | CD           | PRO | 1466       | -10.597 | 11.793 | 5.810  | 1.00 | 36.41 |
| ATOM 18     | CA           | PRO | 1466       | -12.741 | 10.727 | 6.189  | 1.00 | 36.13 |
| ATOM 19     | CB           | PRO | 1466       | -12.110 | 10.262 | 4.878  | 1.00 | 37.50 |
| ATOM 20     | CG           | PRO | 1466       | -10.629 | 10.459 | 5.135  | 1.00 | 36.20 |
| ATOM 21     | C            | PRO | 1466       | -12.846 | 9.595  | 7.201  | 1.00 | 35.61 |
| ATOM 22     | O            | PRO | 1466       | -11.847 | 9.174  | 7.788  | 1.00 | 35.18 |
| ATOM 23     | N            | GLU | 1467       | -14.060 | 9.121  | 7.429  | 1.00 | 35.38 |
| ATOM 25     | CA           | GLU | 1467       | -14.268 | 8.053  | 8.377  | 1.00 | 35.43 |
| ATOM 26     | CB           | GLU | 1467       | -15.744 | 7.965  | 8.746  | 1.00 | 41.10 |
| ATOM 27     | CG           | GLU | 1467       | -16.375 | 9.280  | 9.098  | 1.00 | 48.25 |
| ATOM 28     | CD           | GLU | 1467       | -17.819 | 9.145  | 9.596  | 1.00 | 50.24 |
| ATOM 29     | OE1          | GLU | 1467       | -18.446 | 8.071  | 9.378  | 1.00 | 52.82 |
| ATOM 30     | OE2          | GLU | 1467       | -18.314 | 10.109 | 10.230 | 1.00 | 51.26 |
| ATOM 31     | C            | GLU | 1467       | -13.838 | 6.714  | 7.801  | 1.00 | 32.65 |
| ATOM 32     | O            | GLU | 1467       | -13.899 | 6.511  | 6.591  | 1.00 | 35.06 |
| ATOM 33     | N            | ASP | 1468       | -13.299 | 5.854  | 8.659  | 1.00 | 30.46 |
| ATOM 35     | CA           | ASP | 1468       | -12.883 | 4.516  | 8.262  | 1.00 | 28.85 |
| ATOM 36     | CB           | ASP | 1468       | -11.384 | 4.424  | 7.975  | 1.00 | 29.34 |
| ATOM 37     | CG           | ASP | 1468       | -10.985 | 3.072  | 7.408  | 1.00 | 27.57 |
| ATOM 38     | OD1          | ASP | 1468       | -11.833 | 2.159  | 7.359  | 1.00 | 27.78 |
| ATOM 39     | OD2          | ASP | 1468       | -9.817  | 2.916  | 7.003  | 1.00 | 30.64 |
| ATOM 40     | C            | ASP | 1468       | -13.252 | 3.564  | 9.384  | 1.00 | 29.29 |
| ATOM 41     | O            | ASP | 1468       | -12.481 | 3.364  | 10.336 | 1.00 | 27.76 |
| ATOM 42     | N            | PRO | 1469       | -14.435 | 2.939  | 9.268  | 1.00 | 28.99 |
| ATOM 43     | CD           | PRO | 1469       | -15.354 | 3.091  | 8.120  | 1.00 | 28.09 |
| ATOM 44     | CA           | PRO | 1469       | -14.971 | 1.987  | 10.244 | 1.00 | 30.01 |
| ATOM 45     | CB           | PRO | 1469       | -16.244 | 1.473  | 9.553  | 1.00 | 33.33 |
| ATOM 46     | CG           | PRO | 1469       | -16.665 | 2.630  | 8.690  | 1.00 | 30.53 |
| ATOM 47     | C            | PRO | 1469       | -14.012 | 0.848  | 10.563 | 1.00 | 28.96 |
| ATOM 48     | O            | PRO | 1469       | -14.085 | 0.251  | 11.636 | 1.00 | 28.52 |
| ATOM 49     | N            | ARG | 1470       | -13.106 | 0.556  | 9.631  | 1.00 | 27.59 |
| ATOM 51     | CA           | ARG | 1470       | -12.139 | -0.520 | 9.810  | 1.00 | 27.37 |
| ATOM 52     | CB           | ARG | 1470       | -11.301 | -0.707 | 8.533  | 1.00 | 28.84 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 53  | CG  | ARG | 1470 | -12.049 | -1.279 | 7.317  | 1.00 | 30.57 |
| ATOM | 54  | CD  | ARG | 1470 | -11.137 | -1.352 | 6.068  | 1.00 | 26.71 |
| ATOM | 55  | NE  | ARG | 1470 | -10.489 | -0.068 | 5.793  | 1.00 | 31.26 |
| ATOM | 57  | CZ  | ARG | 1470 | -9.603  | 0.151  | 4.823  | 1.00 | 32.60 |
| ATOM | 58  | NH1 | ARG | 1470 | -9.241  | -0.828 | 3.999  | 1.00 | 33.19 |
| ATOM | 61  | NH2 | ARG | 1470 | -9.067  | 1.359  | 4.686  | 1.00 | 28.65 |
| ATOM | 64  | C   | ARG | 1470 | -11.180 | -0.285 | 10.981 | 1.00 | 29.21 |
| ATOM | 65  | O   | ARG | 1470 | -10.757 | -1.230 | 11.641 | 1.00 | 28.47 |
| ATOM | 66  | N   | TRP | 1471 | -10.909 | 0.977  | 11.280 | 1.00 | 27.80 |
| ATOM | 68  | CA  | TRP | 1471 | -9.940  | 1.314  | 12.306 | 1.00 | 28.62 |
| ATOM | 69  | CB  | TRP | 1471 | -8.729  | 1.944  | 11.609 | 1.00 | 24.97 |
| ATOM | 70  | CG  | TRP | 1471 | -8.044  | 0.976  | 10.728 | 1.00 | 24.86 |
| ATOM | 71  | CD2 | TRP | 1471 | -7.156  | -0.060 | 11.144 | 1.00 | 28.00 |
| ATOM | 72  | CE2 | TRP | 1471 | -6.782  | -0.776 | 9.989  | 1.00 | 29.23 |
| ATOM | 73  | CE3 | TRP | 1471 | -6.642  | -0.460 | 12.389 | 1.00 | 26.59 |
| ATOM | 74  | CD1 | TRP | 1471 | -8.166  | 0.860  | 9.374  | 1.00 | 27.23 |
| ATOM | 75  | NE1 | TRP | 1471 | -7.413  | -0.192 | 8.922  | 1.00 | 30.10 |
| ATOM | 77  | CZ2 | TRP | 1471 | -5.912  | -1.866 | 10.036 | 1.00 | 28.70 |
| ATOM | 78  | CZ3 | TRP | 1471 | -5.778  | -1.545 | 12.435 | 1.00 | 27.18 |
| ATOM | 79  | CH2 | TRP | 1471 | -5.424  | -2.237 | 11.266 | 1.00 | 27.23 |
| ATOM | 80  | C   | TRP | 1471 | -10.371 | 2.223  | 13.440 | 1.00 | 28.42 |
| ATOM | 81  | O   | TRP | 1471 | -9.664  | 2.321  | 14.442 | 1.00 | 26.48 |
| ATOM | 82  | N   | GLU | 1472 | -11.521 | 2.874  | 13.293 | 1.00 | 28.62 |
| ATOM | 84  | CA  | GLU | 1472 | -11.981 | 3.823  | 14.297 | 1.00 | 27.16 |
| ATOM | 85  | CB  | GLU | 1472 | -13.245 | 4.534  | 13.799 | 1.00 | 28.89 |
| ATOM | 86  | CG  | GLU | 1472 | -13.552 | 5.869  | 14.520 | 1.00 | 29.09 |
| ATOM | 87  | CD  | GLU | 1472 | -12.692 | 7.042  | 14.054 | 1.00 | 26.43 |
| ATOM | 88  | OE1 | GLU | 1472 | -12.134 | 7.009  | 12.938 | 1.00 | 28.59 |
| ATOM | 89  | OE2 | GLU | 1472 | -12.596 | 8.024  | 14.801 | 1.00 | 27.28 |
| ATOM | 90  | C   | GLU | 1472 | -12.217 | 3.269  | 15.701 | 1.00 | 25.10 |
| ATOM | 91  | O   | GLU | 1472 | -12.763 | 2.196  | 15.861 | 1.00 | 26.48 |
| ATOM | 92  | N   | LEU | 1473 | -11.750 | 3.991  | 16.711 | 1.00 | 24.65 |
| ATOM | 94  | CA  | LEU | 1473 | -11.962 | 3.608  | 18.104 | 1.00 | 26.27 |
| ATOM | 95  | CB  | LEU | 1473 | -10.645 | 3.266  | 18.817 | 1.00 | 28.24 |
| ATOM | 96  | CG  | LEU | 1473 | -10.750 | 3.025  | 20.337 | 1.00 | 27.23 |
| ATOM | 97  | CD1 | LEU | 1473 | -11.323 | 1.636  | 20.642 | 1.00 | 25.23 |
| ATOM | 98  | CD2 | LEU | 1473 | -9.390  | 3.183  | 21.000 | 1.00 | 26.33 |
| ATOM | 99  | C   | LEU | 1473 | -12.546 | 4.856  | 18.740 | 1.00 | 26.52 |
| ATOM | 100 | O   | LEU | 1473 | -12.122 | 5.973  | 18.411 | 1.00 | 25.16 |
| ATOM | 101 | N   | PRO | 1474 | -13.610 | 4.703  | 19.554 | 1.00 | 28.52 |
| ATOM | 102 | CD  | PRO | 1474 | -14.435 | 3.500  | 19.770 | 1.00 | 29.65 |
| ATOM | 103 | CA  | PRO | 1474 | -14.215 | 5.870  | 20.207 | 1.00 | 29.18 |
| ATOM | 104 | CB  | PRO | 1474 | -15.368 | 5.251  | 21.003 | 1.00 | 28.58 |
| ATOM | 105 | CG  | PRO | 1474 | -15.768 | 4.097  | 20.154 | 1.00 | 28.17 |
| ATOM | 106 | C   | PRO | 1474 | -13.173 | 6.528  | 21.124 | 1.00 | 29.75 |
| ATOM | 107 | O   | PRO | 1474 | -12.427 | 5.841  | 21.828 | 1.00 | 31.78 |
| ATOM | 108 | N   | ARG | 1475 | -13.107 | 7.849  | 21.097 | 1.00 | 30.76 |
| ATOM | 110 | CA  | ARG | 1475 | -12.149 | 8.588  | 21.900 | 1.00 | 32.26 |
| ATOM | 111 | CB  | ARG | 1475 | -12.362 | 10.083 | 21.743 | 1.00 | 31.58 |
| ATOM | 112 | CG  | ARG | 1475 | -12.178 | 10.536 | 20.342 | 1.00 | 37.54 |
| ATOM | 113 | CD  | ARG | 1475 | -12.048 | 12.027 | 20.206 | 1.00 | 36.96 |
| ATOM | 114 | NE  | ARG | 1475 | -11.733 | 12.317 | 18.813 | 1.00 | 40.07 |
| ATOM | 116 | CZ  | ARG | 1475 | -10.503 | 12.501 | 18.352 | 1.00 | 37.59 |
| ATOM | 117 | NH1 | ARG | 1475 | -9.470  | 12.447 | 19.186 | 1.00 | 34.89 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 120 | NH2 | ARG | 1475 | -10.308 | 12.669 | 17.049 | 1.00 | 34.54 |
| ATOM | 123 | C   | ARG | 1475 | -12.173 | 8.261  | 23.371 | 1.00 | 35.58 |
| ATOM | 124 | O   | ARG | 1475 | -11.135 | 8.318  | 24.036 | 1.00 | 37.03 |
| ATOM | 125 | N   | ASP | 1476 | -13.356 | 7.958  | 23.889 | 1.00 | 36.68 |
| ATOM | 127 | CA  | ASP | 1476 | -13.498 | 7.647  | 25.307 | 1.00 | 37.07 |
| ATOM | 128 | CB  | ASP | 1476 | -14.967 | 7.759  | 25.740 | 1.00 | 37.87 |
| ATOM | 129 | CG  | ASP | 1476 | -15.851 | 6.704  | 25.115 | 1.00 | 38.93 |
| ATOM | 130 | OD1 | ASP | 1476 | -15.412 | 6.015  | 24.179 | 1.00 | 43.75 |
| ATOM | 131 | OD2 | ASP | 1476 | -17.003 | 6.558  | 25.563 | 1.00 | 45.77 |
| ATOM | 132 | C   | ASP | 1476 | -12.922 | 6.292  | 25.701 | 1.00 | 35.86 |
| ATOM | 133 | O   | ASP | 1476 | -12.923 | 5.928  | 26.878 | 1.00 | 37.98 |
| ATOM | 134 | N   | ARG | 1477 | -12.478 | 5.527  | 24.711 | 1.00 | 33.37 |
| ATOM | 136 | CA  | ARG | 1477 | -11.889 | 4.221  | 24.961 | 1.00 | 31.84 |
| ATOM | 137 | CB  | ARG | 1477 | -12.214 | 3.262  | 23.809 | 1.00 | 31.84 |
| ATOM | 138 | CG  | ARG | 1477 | -13.693 | 2.965  | 23.580 | 1.00 | 29.70 |
| ATOM | 139 | CD  | ARG | 1477 | -14.366 | 2.365  | 24.809 | 1.00 | 33.88 |
| ATOM | 140 | NE  | ARG | 1477 | -14.596 | 3.372  | 25.838 | 1.00 | 33.86 |
| ATOM | 142 | CZ  | ARG | 1477 | -14.845 | 3.102  | 27.113 | 1.00 | 34.14 |
| ATOM | 143 | NH1 | ARG | 1477 | -14.906 | 1.846  | 27.542 | 1.00 | 30.58 |
| ATOM | 146 | NH2 | ARG | 1477 | -15.024 | 4.102  | 27.961 | 1.00 | 33.14 |
| ATOM | 149 | C   | ARG | 1477 | -10.373 | 4.338  | 25.105 | 1.00 | 31.30 |
| ATOM | 150 | O   | ARG | 1477 | -9.679  | 3.362  | 25.365 | 1.00 | 32.32 |
| ATOM | 151 | N   | LEU | 1478 | -9.856  | 5.544  | 24.978 | 1.00 | 32.85 |
| ATOM | 153 | CA  | LEU | 1478 | -8.426  | 5.739  | 25.054 | 1.00 | 35.64 |
| ATOM | 154 | CB  | LEU | 1478 | -7.964  | 6.360  | 23.737 | 1.00 | 34.96 |
| ATOM | 155 | CG  | LEU | 1478 | -6.498  | 6.291  | 23.331 | 1.00 | 36.36 |
| ATOM | 156 | CD1 | LEU | 1478 | -6.059  | 4.833  | 23.192 | 1.00 | 30.71 |
| ATOM | 157 | CD2 | LEU | 1478 | -6.335  | 7.048  | 22.020 | 1.00 | 33.97 |
| ATOM | 158 | C   | LEU | 1478 | -8.054  | 6.625  | 26.243 | 1.00 | 37.60 |
| ATOM | 159 | O   | LEU | 1478 | -8.366  | 7.815  | 26.263 | 1.00 | 41.20 |
| ATOM | 160 | N   | VAL | 1479 | -7.442  | 6.023  | 27.257 | 1.00 | 36.52 |
| ATOM | 162 | CA  | VAL | 1479 | -7.008  | 6.745  | 28.449 | 1.00 | 35.59 |
| ATOM | 163 | CB  | VAL | 1479 | -7.041  | 5.829  | 29.688 | 1.00 | 35.92 |
| ATOM | 164 | CG1 | VAL | 1479 | -6.712  | 6.627  | 30.926 | 1.00 | 39.40 |
| ATOM | 165 | CG2 | VAL | 1479 | -8.404  | 5.163  | 29.825 | 1.00 | 34.46 |
| ATOM | 166 | C   | VAL | 1479 | -5.577  | 7.224  | 28.197 | 1.00 | 35.36 |
| ATOM | 167 | O   | VAL | 1479 | -4.622  | 6.443  | 28.269 | 1.00 | 32.50 |
| ATOM | 168 | N   | LEU | 1480 | -5.439  | 8.506  | 27.878 | 1.00 | 37.77 |
| ATOM | 170 | CA  | LEU | 1480 | -4.132  | 9.086  | 27.572 | 1.00 | 42.77 |
| ATOM | 171 | CB  | LEU | 1480 | -4.298  | 10.421 | 26.842 | 1.00 | 41.84 |
| ATOM | 172 | CG  | LEU | 1480 | -4.991  | 10.369 | 25.471 | 1.00 | 42.45 |
| ATOM | 173 | CD1 | LEU | 1480 | -5.135  | 11.774 | 24.924 | 1.00 | 42.58 |
| ATOM | 174 | CD2 | LEU | 1480 | -4.200  | 9.508  | 24.502 | 1.00 | 43.09 |
| ATOM | 175 | C   | LEU | 1480 | -3.211  | 9.233  | 28.778 | 1.00 | 45.25 |
| ATOM | 176 | O   | LEU | 1480 | -3.621  | 9.739  | 29.822 | 1.00 | 45.47 |
| ATOM | 177 | N   | GLY | 1481 | -1.958  | 8.816  | 28.612 | 1.00 | 46.82 |
| ATOM | 179 | CA  | GLY | 1481 | -1.016  | 8.889  | 29.708 | 1.00 | 50.47 |
| ATOM | 180 | C   | GLY | 1481 | 0.296   | 9.617  | 29.472 | 1.00 | 52.24 |
| ATOM | 181 | O   | GLY | 1481 | 0.360   | 10.638 | 28.781 | 1.00 | 53.41 |
| ATOM | 182 | N   | LYS | 1482 | 1.349   | 9.070  | 30.068 | 1.00 | 53.64 |
| ATOM | 184 | CA  | LYS | 1482 | 2.697   | 9.627  | 30.000 | 1.00 | 56.19 |
| ATOM | 185 | CB  | LYS | 1482 | 3.636   | 8.776  | 30.859 | 1.00 | 57.19 |
| ATOM | 186 | CG  | LYS | 1482 | 5.115   | 9.023  | 30.628 | 1.00 | 61.02 |
| ATOM | 187 | CD  | LYS | 1482 | 5.938   | 7.831  | 31.089 | 1.00 | 63.12 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 188 | CE  | LYS | 1482 | 5.494  | 6.547  | 30.395 | 1.00 | 61.98 |
| ATOM | 189 | NZ  | LYS | 1482 | 6.252  | 5.368  | 30.899 | 1.00 | 63.38 |
| ATOM | 193 | C   | LYS | 1482 | 3.297  | 9.795  | 28.604 | 1.00 | 56.56 |
| ATOM | 194 | O   | LYS | 1482 | 3.291  | 8.868  | 27.791 | 1.00 | 55.03 |
| ATOM | 195 | N   | PRO | 1483 | 3.852  | 10.983 | 28.323 | 1.00 | 58.31 |
| ATOM | 196 | CD  | PRO | 1483 | 3.859  | 12.191 | 29.167 | 1.00 | 56.98 |
| ATOM | 197 | CA  | PRO | 1483 | 4.465  | 11.254 | 27.020 | 1.00 | 59.52 |
| ATOM | 198 | CB  | PRO | 1483 | 4.910  | 12.711 | 27.155 | 1.00 | 58.75 |
| ATOM | 199 | CG  | PRO | 1483 | 3.927  | 13.278 | 28.141 | 1.00 | 58.79 |
| ATOM | 200 | C   | PRO | 1483 | 5.673  | 10.335 | 26.834 | 1.00 | 61.17 |
| ATOM | 201 | O   | PRO | 1483 | 6.509  | 10.216 | 27.731 | 1.00 | 61.31 |
| ATOM | 202 | N   | LEU | 1484 | 5.728  | 9.643  | 25.702 | 1.00 | 64.31 |
| ATOM | 204 | CA  | LEU | 1484 | 6.838  | 8.738  | 25.408 | 1.00 | 67.77 |
| ATOM | 205 | CB  | LEU | 1484 | 6.349  | 7.512  | 24.640 | 1.00 | 67.66 |
| ATOM | 206 | CG  | LEU | 1484 | 5.415  | 6.558  | 25.386 | 1.00 | 69.00 |
| ATOM | 207 | CD1 | LEU | 1484 | 4.943  | 5.457  | 24.445 | 1.00 | 66.76 |
| ATOM | 208 | CD2 | LEU | 1484 | 6.126  | 5.972  | 26.604 | 1.00 | 67.77 |
| ATOM | 209 | C   | LEU | 1484 | 7.934  | 9.431  | 24.608 | 1.00 | 70.82 |
| ATOM | 210 | O   | LEU | 1484 | 9.117  | 9.115  | 24.759 | 1.00 | 71.82 |
| ATOM | 211 | N   | GLY | 1485 | 7.534  | 10.357 | 23.742 | 1.00 | 73.28 |
| ATOM | 213 | CA  | GLY | 1485 | 8.492  | 11.077 | 22.922 | 1.00 | 74.53 |
| ATOM | 214 | C   | GLY | 1485 | 7.819  | 11.754 | 21.747 | 1.00 | 75.19 |
| ATOM | 215 | O   | GLY | 1485 | 6.635  | 12.090 | 21.822 | 1.00 | 75.61 |
| ATOM | 216 | N   | GLN | 1491 | 4.406  | 14.274 | 18.638 | 1.00 | 50.72 |
| ATOM | 218 | CA  | GLN | 1491 | 4.042  | 13.876 | 19.994 | 1.00 | 47.33 |
| ATOM | 219 | CB  | GLN | 1491 | 3.033  | 14.869 | 20.587 | 1.00 | 46.67 |
| ATOM | 220 | C   | GLN | 1491 | 3.486  | 12.449 | 20.073 | 1.00 | 46.66 |
| ATOM | 221 | O   | GLN | 1491 | 2.581  | 12.074 | 19.323 | 1.00 | 45.20 |
| ATOM | 222 | N   | VAL | 1492 | 4.072  | 11.650 | 20.960 | 1.00 | 45.41 |
| ATOM | 224 | CA  | VAL | 1492 | 3.646  | 10.274 | 21.184 | 1.00 | 43.83 |
| ATOM | 225 | CB  | VAL | 1492 | 4.680  | 9.244  | 20.709 | 1.00 | 41.60 |
| ATOM | 226 | CG1 | VAL | 1492 | 4.138  | 7.849  | 20.937 | 1.00 | 41.35 |
| ATOM | 227 | CG2 | VAL | 1492 | 5.007  | 9.445  | 19.237 | 1.00 | 42.72 |
| ATOM | 228 | C   | VAL | 1492 | 3.458  | 10.084 | 22.683 | 1.00 | 44.45 |
| ATOM | 229 | O   | VAL | 1492 | 4.335  | 10.437 | 23.482 | 1.00 | 43.86 |
| ATOM | 230 | N   | VAL | 1493 | 2.309  | 9.548  | 23.070 | 1.00 | 42.67 |
| ATOM | 232 | CA  | VAL | 1493 | 2.029  | 9.321  | 24.477 | 1.00 | 41.05 |
| ATOM | 233 | CB  | VAL | 1493 | 0.884  | 10.242 | 25.013 | 1.00 | 40.64 |
| ATOM | 234 | CG1 | VAL | 1493 | 1.177  | 11.693 | 24.722 | 1.00 | 42.40 |
| ATOM | 235 | CG2 | VAL | 1493 | -0.459 | 9.844  | 24.427 | 1.00 | 43.36 |
| ATOM | 236 | C   | VAL | 1493 | 1.626  | 7.880  | 24.704 | 1.00 | 40.09 |
| ATOM | 237 | O   | VAL | 1493 | 1.129  | 7.212  | 23.796 | 1.00 | 39.99 |
| ATOM | 238 | N   | LEU | 1494 | 1.927  | 7.374  | 25.890 | 1.00 | 37.10 |
| ATOM | 240 | CA  | LEU | 1494 | 1.535  | 6.036  | 26.250 | 1.00 | 35.08 |
| ATOM | 241 | CB  | LEU | 1494 | 2.359  | 5.542  | 27.440 | 1.00 | 35.57 |
| ATOM | 242 | CG  | LEU | 1494 | 2.036  | 4.161  | 28.007 | 1.00 | 36.87 |
| ATOM | 243 | CD1 | LEU | 1494 | 2.123  | 3.085  | 26.931 | 1.00 | 36.90 |
| ATOM | 244 | CD2 | LEU | 1494 | 2.998  | 3.860  | 29.143 | 1.00 | 41.99 |
| ATOM | 245 | C   | LEU | 1494 | 0.077  | 6.236  | 26.648 | 1.00 | 33.31 |
| ATOM | 246 | O   | LEU | 1494 | -0.311 | 7.318  | 27.097 | 1.00 | 32.93 |
| ATOM | 247 | N   | ALA | 1495 | -0.740 | 5.219  | 26.435 | 1.00 | 33.35 |
| ATOM | 249 | CA  | ALA | 1495 | -2.147 | 5.292  | 26.773 | 1.00 | 30.67 |
| ATOM | 250 | CB  | ALA | 1495 | -2.923 | 5.937  | 25.637 | 1.00 | 30.35 |
| ATOM | 251 | C   | ALA | 1495 | -2.661 | 3.893  | 27.025 | 1.00 | 29.97 |



|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 252 | O   | ALA | 1495 | -1.944  | 2.909  | 26.840 | 1.00 | 28.15 |
| ATOM | 253 | N   | GLU | 1496 | -3.898  | 3.813  | 27.488 | 1.00 | 30.37 |
| ATOM | 255 | CA  | GLU | 1496 | -4.537  | 2.536  | 27.745 | 1.00 | 31.47 |
| ATOM | 256 | CB  | GLU | 1496 | -4.862  | 2.392  | 29.223 | 1.00 | 32.48 |
| ATOM | 257 | CG  | GLU | 1496 | -3.627  | 2.239  | 30.093 | 1.00 | 37.81 |
| ATOM | 258 | CD  | GLU | 1496 | -3.938  | 2.426  | 31.565 | 1.00 | 41.09 |
| ATOM | 259 | OE1 | GLU | 1496 | -4.328  | 3.548  | 31.944 | 1.00 | 41.53 |
| ATOM | 260 | OE2 | GLU | 1496 | -3.797  | 1.453  | 32.341 | 1.00 | 44.12 |
| ATOM | 261 | C   | GLU | 1496 | -5.806  | 2.524  | 26.916 | 1.00 | 32.72 |
| ATOM | 262 | O   | GLU | 1496 | -6.586  | 3.478  | 26.954 | 1.00 | 33.91 |
| ATOM | 263 | N   | ALA | 1497 | -5.953  | 1.494  | 26.094 | 1.00 | 31.06 |
| ATOM | 265 | CA  | ALA | 1497 | -7.117  | 1.353  | 25.239 | 1.00 | 32.33 |
| ATOM | 266 | CB  | ALA | 1497 | -6.691  | 0.879  | 23.859 | 1.00 | 29.56 |
| ATOM | 267 | C   | ALA | 1497 | -8.056  | 0.343  | 25.885 | 1.00 | 32.26 |
| ATOM | 268 | O   | ALA | 1497 | -7.648  | -0.773 | 26.197 | 1.00 | 33.55 |
| ATOM | 269 | N   | ILE | 1498 | -9.286  | 0.759  | 26.160 | 1.00 | 32.99 |
| ATOM | 271 | CA  | ILE | 1498 | -10.276 | -0.126 | 26.766 | 1.00 | 34.00 |
| ATOM | 272 | CB  | ILE | 1498 | -11.329 | 0.668  | 27.592 | 1.00 | 34.69 |
| ATOM | 273 | CG2 | ILE | 1498 | -12.341 | -0.288 | 28.240 | 1.00 | 34.24 |
| ATOM | 274 | CG1 | ILE | 1498 | -10.647 | 1.496  | 28.686 | 1.00 | 33.56 |
| ATOM | 275 | CD1 | ILE | 1498 | -11.543 | 2.572  | 29.258 | 1.00 | 31.25 |
| ATOM | 276 | C   | ILE | 1498 | -10.994 | -0.830 | 25.624 | 1.00 | 35.71 |
| ATOM | 277 | O   | ILE | 1498 | -11.618 | -0.181 | 24.786 | 1.00 | 34.88 |
| ATOM | 278 | N   | GLY | 1499 | -10.890 | -2.147 | 25.573 | 1.00 | 40.43 |
| ATOM | 280 | CA  | GLY | 1499 | -11.553 | -2.884 | 24.516 | 1.00 | 47.63 |
| ATOM | 281 | C   | GLY | 1499 | -10.670 | -3.233 | 23.330 | 1.00 | 53.08 |
| ATOM | 282 | O   | GLY | 1499 | -9.934  | -4.226 | 23.380 | 1.00 | 54.97 |
| ATOM | 283 | N   | LEU | 1500 | -10.713 | -2.394 | 22.294 | 1.00 | 54.18 |
| ATOM | 285 | CA  | LEU | 1500 | -9.957  | -2.603 | 21.055 | 1.00 | 55.26 |
| ATOM | 286 | CB  | LEU | 1500 | -8.444  | -2.726 | 21.305 | 1.00 | 55.39 |
| ATOM | 287 | CG  | LEU | 1500 | -7.562  | -1.472 | 21.241 | 1.00 | 54.27 |
| ATOM | 288 | CD1 | LEU | 1500 | -6.110  | -1.891 | 21.367 | 1.00 | 52.89 |
| ATOM | 289 | CD2 | LEU | 1500 | -7.768  | -0.711 | 19.935 | 1.00 | 50.91 |
| ATOM | 290 | C   | LEU | 1500 | -10.453 | -3.830 | 20.288 | 1.00 | 55.39 |
| ATOM | 291 | O   | LEU | 1500 | -10.376 | -4.963 | 20.774 | 1.00 | 56.23 |
| ATOM | 292 | N   | PRO | 1505 | -13.315 | -5.836 | 25.394 | 1.00 | 53.03 |
| ATOM | 293 | CD  | PRO | 1505 | -13.945 | -7.148 | 25.167 | 1.00 | 55.12 |
| ATOM | 294 | CA  | PRO | 1505 | -14.306 | -4.848 | 25.846 | 1.00 | 50.62 |
| ATOM | 295 | CB  | PRO | 1505 | -15.635 | -5.607 | 25.715 | 1.00 | 50.09 |
| ATOM | 296 | CG  | PRO | 1505 | -15.241 | -7.031 | 25.950 | 1.00 | 52.18 |
| ATOM | 297 | C   | PRO | 1505 | -14.039 | -4.348 | 27.273 | 1.00 | 46.35 |
| ATOM | 298 | O   | PRO | 1505 | -14.065 | -3.143 | 27.524 | 1.00 | 45.82 |
| ATOM | 299 | N   | ASN | 1506 | -13.711 | -5.261 | 28.181 | 1.00 | 42.76 |
| ATOM | 301 | CA  | ASN | 1506 | -13.433 | -4.892 | 29.566 | 1.00 | 45.29 |
| ATOM | 302 | CB  | ASN | 1506 | -14.283 | -5.728 | 30.529 | 1.00 | 45.92 |
| ATOM | 303 | CG  | ASN | 1506 | -15.752 | -5.395 | 30.441 | 1.00 | 46.17 |
| ATOM | 304 | OD1 | ASN | 1506 | -16.132 | -4.232 | 30.390 | 1.00 | 48.57 |
| ATOM | 305 | ND2 | ASN | 1506 | -16.589 | -6.418 | 30.406 | 1.00 | 48.63 |
| ATOM | 308 | C   | ASN | 1506 | -11.954 | -5.008 | 29.939 | 1.00 | 45.33 |
| ATOM | 309 | O   | ASN | 1506 | -11.597 | -5.084 | 31.121 | 1.00 | 44.53 |
| ATOM | 310 | N   | ARG | 1507 | -11.100 | -5.010 | 28.924 | 1.00 | 45.63 |
| ATOM | 312 | CA  | ARG | 1507 | -9.660  | -5.122 | 29.117 | 1.00 | 45.57 |
| ATOM | 313 | CB  | ARG | 1507 | -9.131  | -6.354 | 28.375 | 1.00 | 53.33 |
| ATOM | 314 | CG  | ARG | 1507 | -9.407  | -7.685 | 29.043 | 1.00 | 61.39 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 315 | CD  | ARG | 1507 | -8.336 | -8.028  | 30.063 | 1.00 | 67.74 |
| ATOM | 316 | NE  | ARG | 1507 | -8.525 | -9.376  | 30.585 | 1.00 | 74.64 |
| ATOM | 318 | CZ  | ARG | 1507 | -7.970 | -9.842  | 31.701 | 1.00 | 80.01 |
| ATOM | 319 | NH1 | ARG | 1507 | -7.166 | -9.075  | 32.433 | 1.00 | 80.04 |
| ATOM | 322 | NH2 | ARG | 1507 | -8.268 | -11.068 | 32.115 | 1.00 | 83.41 |
| ATOM | 325 | C   | ARG | 1507 | -8.964 | -3.897  | 28.555 | 1.00 | 40.94 |
| ATOM | 326 | O   | ARG | 1507 | -9.370 | -3.375  | 27.517 | 1.00 | 37.60 |
| ATOM | 327 | N   | VAL | 1508 | -7.956 | -3.409  | 29.267 | 1.00 | 39.33 |
| ATOM | 329 | CA  | VAL | 1508 | -7.190 | -2.269  | 28.789 | 1.00 | 37.26 |
| ATOM | 330 | CB  | VAL | 1508 | -6.854 | -1.224  | 29.905 | 1.00 | 36.25 |
| ATOM | 331 | CG1 | VAL | 1508 | -8.124 | -0.739  | 30.571 | 1.00 | 39.63 |
| ATOM | 332 | CG2 | VAL | 1508 | -5.903 | -1.796  | 30.928 | 1.00 | 36.92 |
| ATOM | 333 | C   | VAL | 1508 | -5.898 | -2.818  | 28.188 | 1.00 | 34.38 |
| ATOM | 334 | O   | VAL | 1508 | -5.387 | -3.851  | 28.630 | 1.00 | 32.85 |
| ATOM | 335 | N   | THR | 1509 | -5.406 | -2.140  | 27.159 | 1.00 | 30.47 |
| ATOM | 337 | CA  | THR | 1509 | -4.174 | -2.523  | 26.491 | 1.00 | 31.65 |
| ATOM | 338 | CB  | THR | 1509 | -4.455 | -2.959  | 25.027 | 1.00 | 34.13 |
| ATOM | 339 | OG1 | THR | 1509 | -5.426 | -4.013  | 25.018 | 1.00 | 40.74 |
| ATOM | 341 | CG2 | THR | 1509 | -3.184 | -3.458  | 24.345 | 1.00 | 31.06 |
| ATOM | 342 | C   | THR | 1509 | -3.270 | -1.299  | 26.461 | 1.00 | 28.38 |
| ATOM | 343 | O   | THR | 1509 | -3.716 | -0.219  | 26.104 | 1.00 | 27.78 |
| ATOM | 344 | N   | LYS | 1510 | -2.023 | -1.442  | 26.896 | 1.00 | 29.48 |
| ATOM | 346 | CA  | LYS | 1510 | -1.101 | -0.312  | 26.835 | 1.00 | 30.54 |
| ATOM | 347 | CB  | LYS | 1510 | 0.172  | -0.558  | 27.635 | 1.00 | 27.88 |
| ATOM | 348 | CG  | LYS | 1510 | -0.037 | -0.600  | 29.118 | 1.00 | 33.91 |
| ATOM | 349 | CD  | LYS | 1510 | 1.284  | -0.759  | 29.840 | 1.00 | 40.30 |
| ATOM | 350 | CE  | LYS | 1510 | 1.145  | -1.674  | 31.062 | 1.00 | 46.24 |
| ATOM | 351 | NZ  | LYS | 1510 | 0.338  | -1.096  | 32.187 | 1.00 | 49.09 |
| ATOM | 355 | C   | LYS | 1510 | -0.757 | -0.166  | 25.365 | 1.00 | 28.64 |
| ATOM | 356 | O   | LYS | 1510 | -0.402 | -1.142  | 24.704 | 1.00 | 28.76 |
| ATOM | 357 | N   | VAL | 1511 | -0.902 | 1.048   | 24.856 | 1.00 | 29.34 |
| ATOM | 359 | CA  | VAL | 1511 | -0.627 | 1.347   | 23.463 | 1.00 | 29.79 |
| ATOM | 360 | CB  | VAL | 1511 | -1.951 | 1.457   | 22.658 | 1.00 | 27.14 |
| ATOM | 361 | CG1 | VAL | 1511 | -2.681 | 0.111   | 22.657 | 1.00 | 24.56 |
| ATOM | 362 | CG2 | VAL | 1511 | -2.837 | 2.561   | 23.243 | 1.00 | 22.15 |
| ATOM | 363 | C   | VAL | 1511 | 0.123  | 2.672   | 23.361 | 1.00 | 29.83 |
| ATOM | 364 | O   | VAL | 1511 | 0.213  | 3.413   | 24.338 | 1.00 | 33.14 |
| ATOM | 365 | N   | ALA | 1512 | 0.705  | 2.939   | 22.196 | 1.00 | 27.86 |
| ATOM | 367 | CA  | ALA | 1512 | 1.405  | 4.192   | 21.962 | 1.00 | 25.55 |
| ATOM | 368 | CB  | ALA | 1512 | 2.743  | 3.935   | 21.297 | 1.00 | 24.69 |
| ATOM | 369 | C   | ALA | 1512 | 0.500  | 5.009   | 21.057 | 1.00 | 25.25 |
| ATOM | 370 | O   | ALA | 1512 | -0.061 | 4.483   | 20.107 | 1.00 | 27.18 |
| ATOM | 371 | N   | VAL | 1513 | 0.340  | 6.289   | 21.360 | 1.00 | 29.63 |
| ATOM | 373 | CA  | VAL | 1513 | -0.520 | 7.165   | 20.573 | 1.00 | 32.66 |
| ATOM | 374 | CB  | VAL | 1513 | -1.704 | 7.713   | 21.422 | 1.00 | 32.47 |
| ATOM | 375 | CG1 | VAL | 1513 | -2.609 | 8.585   | 20.574 | 1.00 | 32.29 |
| ATOM | 376 | CG2 | VAL | 1513 | -2.508 | 6.559   | 22.031 | 1.00 | 32.15 |
| ATOM | 377 | C   | VAL | 1513 | 0.238  | 8.334   | 19.938 | 1.00 | 34.67 |
| ATOM | 378 | O   | VAL | 1513 | 0.792  | 9.185   | 20.635 | 1.00 | 34.65 |
| ATOM | 379 | N   | LYS | 1514 | 0.207  | 8.367   | 18.605 | 1.00 | 36.88 |
| ATOM | 381 | CA  | LYS | 1514 | 0.859  | 9.390   | 17.789 | 1.00 | 36.43 |
| ATOM | 382 | CB  | LYS | 1514 | 1.349  | 8.764   | 16.489 | 1.00 | 36.37 |
| ATOM | 383 | CG  | LYS | 1514 | 2.250  | 7.563   | 16.697 | 1.00 | 39.49 |
| ATOM | 384 | CD  | LYS | 1514 | 2.559  | 6.854   | 15.390 | 1.00 | 45.29 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 385 | CE  | LYS | 1514 | 3.080  | 7.815  | 14.331 | 1.00 | 50.70 |
| ATOM | 386 | NZ  | LYS | 1514 | 4.212  | 8.685  | 14.798 | 1.00 | 51.41 |
| ATOM | 390 | C   | LYS | 1514 | -0.121 | 10.496 | 17.459 | 1.00 | 36.75 |
| ATOM | 391 | O   | LYS | 1514 | -1.228 | 10.234 | 16.978 | 1.00 | 35.42 |
| ATOM | 392 | N   | MET | 1515 | 0.294  | 11.731 | 17.700 | 1.00 | 38.12 |
| ATOM | 394 | CA  | MET | 1515 | -0.545 | 12.882 | 17.432 | 1.00 | 41.90 |
| ATOM | 395 | CB  | MET | 1515 | -1.371 | 13.238 | 18.668 | 1.00 | 43.08 |
| ATOM | 396 | CG  | MET | 1515 | -0.536 | 13.601 | 19.880 | 1.00 | 45.01 |
| ATOM | 397 | SD  | MET | 1515 | -1.561 | 13.784 | 21.324 | 1.00 | 46.03 |
| ATOM | 398 | CE  | MET | 1515 | -1.675 | 12.072 | 21.885 | 1.00 | 44.02 |
| ATOM | 399 | C   | MET | 1515 | 0.314  | 14.065 | 17.021 | 1.00 | 44.65 |
| ATOM | 400 | O   | MET | 1515 | 1.543  | 14.013 | 17.094 | 1.00 | 45.64 |
| ATOM | 401 | N   | LEU | 1516 | -0.347 | 15.123 | 16.568 | 1.00 | 47.08 |
| ATOM | 403 | CA  | LEU | 1516 | 0.329  | 16.337 | 16.134 | 1.00 | 48.08 |
| ATOM | 404 | CB  | LEU | 1516 | -0.500 | 17.033 | 15.054 | 1.00 | 45.50 |
| ATOM | 405 | CG  | LEU | 1516 | -0.764 | 16.265 | 13.764 | 1.00 | 43.22 |
| ATOM | 406 | CD1 | LEU | 1516 | -1.783 | 17.014 | 12.946 | 1.00 | 40.32 |
| ATOM | 407 | CD2 | LEU | 1516 | 0.540  | 16.072 | 12.991 | 1.00 | 43.78 |
| ATOM | 408 | C   | LEU | 1516 | 0.516  | 17.302 | 17.297 | 1.00 | 51.27 |
| ATOM | 409 | O   | LEU | 1516 | -0.214 | 17.249 | 18.291 | 1.00 | 50.37 |
| ATOM | 410 | N   | LYS | 1517 | 1.491  | 18.191 | 17.157 | 1.00 | 55.47 |
| ATOM | 412 | CA  | LYS | 1517 | 1.757  | 19.207 | 18.168 | 1.00 | 59.10 |
| ATOM | 413 | CB  | LYS | 1517 | 3.203  | 19.702 | 18.068 | 1.00 | 61.61 |
| ATOM | 414 | CG  | LYS | 1517 | 4.251  | 18.669 | 18.462 | 1.00 | 64.82 |
| ATOM | 415 | CD  | LYS | 1517 | 5.635  | 19.109 | 18.018 | 1.00 | 67.42 |
| ATOM | 416 | CE  | LYS | 1517 | 6.696  | 18.102 | 18.432 | 1.00 | 71.76 |
| ATOM | 417 | NZ  | LYS | 1517 | 8.021  | 18.411 | 17.812 | 1.00 | 73.57 |
| ATOM | 421 | C   | LYS | 1517 | 0.794  | 20.365 | 17.920 | 1.00 | 59.91 |
| ATOM | 422 | O   | LYS | 1517 | 0.187  | 20.456 | 16.852 | 1.00 | 59.88 |
| ATOM | 423 | N   | SER | 1518 | 0.686  | 21.267 | 18.886 | 1.00 | 61.85 |
| ATOM | 425 | CA  | SER | 1518 | -0.216 | 22.409 | 18.760 | 1.00 | 63.70 |
| ATOM | 426 | CB  | SER | 1518 | -0.158 | 23.274 | 20.024 | 1.00 | 64.21 |
| ATOM | 427 | C   | SER | 1518 | 0.079  | 23.263 | 17.529 | 1.00 | 64.37 |
| ATOM | 428 | O   | SER | 1518 | -0.841 | 23.757 | 16.875 | 1.00 | 66.16 |
| ATOM | 429 | N   | ASP | 1519 | 1.359  | 23.410 | 17.202 | 1.00 | 64.15 |
| ATOM | 431 | CA  | ASP | 1519 | 1.767  | 24.217 | 16.054 | 1.00 | 64.55 |
| ATOM | 432 | CB  | ASP | 1519 | 3.109  | 24.897 | 16.343 | 1.00 | 65.84 |
| ATOM | 433 | C   | ASP | 1519 | 1.858  | 23.441 | 14.742 | 1.00 | 63.95 |
| ATOM | 434 | O   | ASP | 1519 | 2.432  | 23.931 | 13.769 | 1.00 | 64.95 |
| ATOM | 435 | N   | ALA | 1520 | 1.303  | 22.232 | 14.719 | 1.00 | 62.57 |
| ATOM | 437 | CA  | ALA | 1520 | 1.329  | 21.398 | 13.521 | 1.00 | 60.34 |
| ATOM | 438 | CB  | ALA | 1520 | 0.704  | 20.039 | 13.810 | 1.00 | 60.53 |
| ATOM | 439 | C   | ALA | 1520 | 0.616  | 22.062 | 12.353 | 1.00 | 58.21 |
| ATOM | 440 | O   | ALA | 1520 | -0.464 | 22.631 | 12.506 | 1.00 | 58.32 |
| ATOM | 441 | N   | THR | 1521 | 1.241  | 22.001 | 11.186 | 1.00 | 55.96 |
| ATOM | 443 | CA  | THR | 1521 | 0.673  | 22.582 | 9.981  | 1.00 | 54.98 |
| ATOM | 444 | CB  | THR | 1521 | 1.783  | 23.013 | 9.031  | 1.00 | 53.84 |
| ATOM | 445 | OG1 | THR | 1521 | 2.554  | 21.862 | 8.659  | 1.00 | 55.84 |
| ATOM | 447 | CG2 | THR | 1521 | 2.693  | 24.026 | 9.703  | 1.00 | 55.01 |
| ATOM | 448 | C   | THR | 1521 | -0.184 | 21.545 | 9.261  | 1.00 | 54.25 |
| ATOM | 449 | O   | THR | 1521 | -0.190 | 20.371 | 9.629  | 1.00 | 54.74 |
| ATOM | 450 | N   | GLU | 1522 | -0.877 | 21.974 | 8.212  | 1.00 | 53.32 |
| ATOM | 452 | CA  | GLU | 1522 | -1.702 | 21.066 | 7.423  | 1.00 | 52.64 |
| ATOM | 453 | CB  | GLU | 1522 | -2.472 | 21.829 | 6.339  | 1.00 | 53.55 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 454 | C   | GLU | 1522 | -0.793 | 20.012 | 6.780  | 1.00 | 51.95 |
| ATOM | 455 | O   | GLU | 1522 | -1.226 | 18.895 | 6.504  | 1.00 | 53.28 |
| ATOM | 456 | N   | LYS | 1523 | 0.464  | 20.377 | 6.544  | 1.00 | 48.66 |
| ATOM | 458 | CA  | LYS | 1523 | 1.429  | 19.460 | 5.963  | 1.00 | 46.30 |
| ATOM | 459 | CB  | LYS | 1523 | 2.730  | 20.201 | 5.620  | 1.00 | 48.30 |
| ATOM | 460 | CG  | LYS | 1523 | 3.889  | 19.308 | 5.164  | 1.00 | 49.58 |
| ATOM | 461 | CD  | LYS | 1523 | 3.487  | 18.388 | 4.016  | 1.00 | 50.87 |
| ATOM | 462 | CE  | LYS | 1523 | 4.688  | 17.635 | 3.466  | 1.00 | 54.08 |
| ATOM | 463 | NZ  | LYS | 1523 | 4.271  | 16.629 | 2.440  | 1.00 | 57.87 |
| ATOM | 467 | C   | LYS | 1523 | 1.699  | 18.391 | 7.006  | 1.00 | 43.89 |
| ATOM | 468 | O   | LYS | 1523 | 1.747  | 17.202 | 6.697  | 1.00 | 43.92 |
| ATOM | 469 | N   | ASP | 1524 | 1.857  | 18.828 | 8.249  | 1.00 | 42.71 |
| ATOM | 471 | CA  | ASP | 1524 | 2.114  | 17.915 | 9.351  | 1.00 | 42.11 |
| ATOM | 472 | CB  | ASP | 1524 | 2.313  | 18.701 | 10.653 | 1.00 | 44.94 |
| ATOM | 473 | CG  | ASP | 1524 | 3.623  | 19.490 | 10.673 | 1.00 | 48.90 |
| ATOM | 474 | OD1 | ASP | 1524 | 3.692  | 20.512 | 11.392 | 1.00 | 51.88 |
| ATOM | 475 | OD2 | ASP | 1524 | 4.590  | 19.084 | 9.990  | 1.00 | 50.06 |
| ATOM | 476 | C   | ASP | 1524 | 0.956  | 16.931 | 9.481  | 1.00 | 39.85 |
| ATOM | 477 | O   | ASP | 1524 | 1.164  | 15.738 | 9.748  | 1.00 | 39.01 |
| ATOM | 478 | N   | LEU | 1525 | -0.261 | 17.438 | 9.296  | 1.00 | 38.32 |
| ATOM | 480 | CA  | LEU | 1525 | -1.461 | 16.610 | 9.355  | 1.00 | 36.16 |
| ATOM | 481 | CB  | LEU | 1525 | -2.720 | 17.470 | 9.200  | 1.00 | 35.13 |
| ATOM | 482 | CG  | LEU | 1525 | -4.081 | 16.760 | 9.186  | 1.00 | 34.70 |
| ATOM | 483 | CD1 | LEU | 1525 | -4.184 | 15.668 | 10.252 | 1.00 | 36.15 |
| ATOM | 484 | CD2 | LEU | 1525 | -5.162 | 17.789 | 9.395  | 1.00 | 32.96 |
| ATOM | 485 | C   | LEU | 1525 | -1.406 | 15.560 | 8.254  | 1.00 | 34.31 |
| ATOM | 486 | O   | LEU | 1525 | -1.575 | 14.377 | 8.518  | 1.00 | 33.34 |
| ATOM | 487 | N   | SER | 1526 | -1.136 | 16.005 | 7.030  | 1.00 | 36.40 |
| ATOM | 489 | CA  | SER | 1526 | -1.039 | 15.128 | 5.865  | 1.00 | 37.16 |
| ATOM | 490 | CB  | SER | 1526 | -0.669 | 15.931 | 4.618  | 1.00 | 38.84 |
| ATOM | 491 | OG  | SER | 1526 | -1.736 | 16.779 | 4.245  | 1.00 | 49.61 |
| ATOM | 493 | C   | SER | 1526 | -0.021 | 14.016 | 6.044  | 1.00 | 35.90 |
| ATOM | 494 | O   | SER | 1526 | -0.273 | 12.873 | 5.670  | 1.00 | 36.68 |
| ATOM | 495 | N   | ASP | 1527 | 1.142  | 14.349 | 6.591  | 1.00 | 35.89 |
| ATOM | 497 | CA  | ASP | 1527 | 2.177  | 13.342 | 6.796  | 1.00 | 35.25 |
| ATOM | 498 | CB  | ASP | 1527 | 3.497  | 13.998 | 7.201  | 1.00 | 35.58 |
| ATOM | 499 | CG  | ASP | 1527 | 4.100  | 14.850 | 6.081  | 1.00 | 37.19 |
| ATOM | 500 | OD1 | ASP | 1527 | 3.750  | 14.653 | 4.895  | 1.00 | 37.38 |
| ATOM | 501 | OD2 | ASP | 1527 | 4.932  | 15.726 | 6.395  | 1.00 | 42.93 |
| ATOM | 502 | C   | ASP | 1527 | 1.749  | 12.274 | 7.799  | 1.00 | 31.77 |
| ATOM | 503 | O   | ASP | 1527 | 2.000  | 11.090 | 7.594  | 1.00 | 30.58 |
| ATOM | 504 | N   | LEU | 1528 | 1.055  | 12.684 | 8.853  | 1.00 | 31.80 |
| ATOM | 506 | CA  | LEU | 1528 | 0.581  | 11.730 | 9.857  | 1.00 | 33.53 |
| ATOM | 507 | CB  | LEU | 1528 | -0.002 | 12.471 | 11.076 | 1.00 | 32.20 |
| ATOM | 508 | CG  | LEU | 1528 | -0.440 | 11.623 | 12.275 | 1.00 | 32.63 |
| ATOM | 509 | CD1 | LEU | 1528 | 0.705  | 10.708 | 12.709 | 1.00 | 33.09 |
| ATOM | 510 | CD2 | LEU | 1528 | -0.891 | 12.512 | 13.426 | 1.00 | 31.52 |
| ATOM | 511 | C   | LEU | 1528 | -0.468 | 10.792 | 9.235  | 1.00 | 32.89 |
| ATOM | 512 | O   | LEU | 1528 | -0.494 | 9.589  | 9.521  | 1.00 | 32.39 |
| ATOM | 513 | N   | ILE | 1529 | -1.336 | 11.357 | 8.393  | 1.00 | 33.72 |
| ATOM | 515 | CA  | ILE | 1529 | -2.376 | 10.591 | 7.711  | 1.00 | 30.48 |
| ATOM | 516 | CB  | ILE | 1529 | -3.336 | 11.505 | 6.895  | 1.00 | 28.85 |
| ATOM | 517 | CG2 | ILE | 1529 | -4.229 | 10.662 | 5.997  | 1.00 | 28.54 |
| ATOM | 518 | CG1 | ILE | 1529 | -4.200 | 12.344 | 7.843  | 1.00 | 29.52 |

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|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 519 | CD1 | ILE | 1529 | -5.143 | 13.308 | 7.133  | 1.00 | 32.07 |
| ATOM | 520 | C   | ILE | 1529 | -1.698 | 9.608  | 6.768  | 1.00 | 31.50 |
| ATOM | 521 | O   | ILE | 1529 | -2.009 | 8.419  | 6.780  | 1.00 | 30.75 |
| ATOM | 522 | N   | SER | 1530 | -0.749 | 10.100 | 5.974  | 1.00 | 33.28 |
| ATOM | 524 | CA  | SER | 1530 | -0.011 | 9.250  | 5.038  | 1.00 | 32.48 |
| ATOM | 525 | CB  | SER | 1530 | 1.114  | 10.042 | 4.368  | 1.00 | 37.20 |
| ATOM | 526 | OG  | SER | 1530 | 0.604  | 11.218 | 3.766  | 1.00 | 49.93 |
| ATOM | 528 | C   | SER | 1530 | 0.583  | 8.045  | 5.756  | 1.00 | 29.05 |
| ATOM | 529 | O   | SER | 1530 | 0.397  | 6.909  | 5.316  | 1.00 | 28.66 |
| ATOM | 530 | N   | GLU | 1531 | 1.259  | 8.290  | 6.878  | 1.00 | 28.21 |
| ATOM | 532 | CA  | GLU | 1531 | 1.880  | 7.207  | 7.631  | 1.00 | 27.30 |
| ATOM | 533 | CB  | GLU | 1531 | 2.656  | 7.733  | 8.839  | 1.00 | 28.90 |
| ATOM | 534 | CG  | GLU | 1531 | 3.271  | 6.609  | 9.672  | 1.00 | 27.17 |
| ATOM | 535 | CD  | GLU | 1531 | 4.047  | 7.081  | 10.886 | 1.00 | 30.07 |
| ATOM | 536 | OE1 | GLU | 1531 | 4.779  | 6.244  | 11.448 | 1.00 | 34.78 |
| ATOM | 537 | OE2 | GLU | 1531 | 3.931  | 8.256  | 11.291 | 1.00 | 31.96 |
| ATOM | 538 | C   | GLU | 1531 | 0.870  | 6.162  | 8.072  | 1.00 | 27.73 |
| ATOM | 539 | O   | GLU | 1531 | 1.160  | 4.961  | 8.028  | 1.00 | 28.72 |
| ATOM | 540 | N   | MET | 1532 | -0.286 | 6.621  | 8.555  | 1.00 | 29.78 |
| ATOM | 542 | CA  | MET | 1532 | -1.373 | 5.734  | 8.990  | 1.00 | 28.79 |
| ATOM | 543 | CB  | MET | 1532 | -2.501 | 6.553  | 9.646  | 1.00 | 28.90 |
| ATOM | 544 | CG  | MET | 1532 | -3.763 | 5.741  | 9.993  | 1.00 | 29.73 |
| ATOM | 545 | SD  | MET | 1532 | -5.089 | 6.693  | 10.765 | 1.00 | 30.19 |
| ATOM | 546 | CE  | MET | 1532 | -5.455 | 7.870  | 9.494  | 1.00 | 26.70 |
| ATOM | 547 | C   | MET | 1532 | -1.935 | 4.937  | 7.796  | 1.00 | 28.34 |
| ATOM | 548 | O   | MET | 1532 | -2.166 | 3.730  | 7.893  | 1.00 | 26.62 |
| ATOM | 549 | N   | GLU | 1533 | -2.165 | 5.624  | 6.678  | 1.00 | 28.85 |
| ATOM | 551 | CA  | GLU | 1533 | -2.684 | 4.984  | 5.467  | 1.00 | 28.24 |
| ATOM | 552 | CB  | GLU | 1533 | -2.936 | 6.027  | 4.384  | 1.00 | 25.42 |
| ATOM | 553 | CG  | GLU | 1533 | -4.099 | 6.956  | 4.719  | 1.00 | 30.05 |
| ATOM | 554 | CD  | GLU | 1533 | -5.393 | 6.201  | 5.021  | 1.00 | 29.47 |
| ATOM | 555 | OE1 | GLU | 1533 | -5.794 | 5.336  | 4.211  | 1.00 | 29.01 |
| ATOM | 556 | OE2 | GLU | 1533 | -6.011 | 6.472  | 6.073  | 1.00 | 33.98 |
| ATOM | 557 | C   | GLU | 1533 | -1.694 | 3.944  | 4.968  | 1.00 | 28.01 |
| ATOM | 558 | O   | GLU | 1533 | -2.072 | 2.845  | 4.573  | 1.00 | 27.39 |
| ATOM | 559 | N   | MET | 1534 | -0.416 | 4.293  | 5.036  | 1.00 | 29.06 |
| ATOM | 561 | CA  | MET | 1534 | 0.662  | 3.413  | 4.621  | 1.00 | 29.74 |
| ATOM | 562 | CB  | MET | 1534 | 1.992  | 4.155  | 4.755  | 1.00 | 33.16 |
| ATOM | 563 | CG  | MET | 1534 | 3.198  | 3.270  | 4.682  | 1.00 | 42.88 |
| ATOM | 564 | SD  | MET | 1534 | 3.805  | 3.127  | 3.042  | 1.00 | 50.20 |
| ATOM | 565 | CE  | MET | 1534 | 5.137  | 4.169  | 3.159  | 1.00 | 42.64 |
| ATOM | 566 | C   | MET | 1534 | 0.641  | 2.156  | 5.493  | 1.00 | 26.90 |
| ATOM | 567 | O   | MET | 1534 | 0.755  | 1.038  | 4.990  | 1.00 | 27.05 |
| ATOM | 568 | N   | MET | 1535 | 0.512  | 2.348  | 6.803  | 1.00 | 25.42 |
| ATOM | 570 | CA  | MET | 1535 | 0.437  | 1.233  | 7.737  | 1.00 | 25.88 |
| ATOM | 571 | CB  | MET | 1535 | 0.325  | 1.741  | 9.181  | 1.00 | 27.63 |
| ATOM | 572 | CG  | MET | 1535 | 1.607  | 2.391  | 9.737  | 1.00 | 27.26 |
| ATOM | 573 | SD  | MET | 1535 | 1.584  | 2.561  | 11.564 | 1.00 | 29.49 |
| ATOM | 574 | CE  | MET | 1535 | 1.294  | 4.255  | 11.699 | 1.00 | 28.22 |
| ATOM | 575 | C   | MET | 1535 | -0.754 | 0.324  | 7.396  | 1.00 | 26.28 |
| ATOM | 576 | O   | MET | 1535 | -0.645 | -0.908 | 7.469  | 1.00 | 25.93 |
| ATOM | 577 | N   | LYS | 1536 | -1.890 | 0.928  | 7.032  | 1.00 | 27.19 |
| ATOM | 579 | CA  | LYS | 1536 | -3.087 | 0.162  | 6.647  | 1.00 | 27.20 |
| ATOM | 580 | CB  | LYS | 1536 | -4.257 | 1.088  | 6.310  | 1.00 | 25.29 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 581 | CG  | LYS | 1536 | -4.897 | 1.770   | 7.491  | 1.00 | 23.86 |
| ATOM | 582 | CD  | LYS | 1536 | -5.884 | 2.820   | 7.017  | 1.00 | 22.16 |
| ATOM | 583 | CE  | LYS | 1536 | -6.460 | 3.588   | 8.174  | 1.00 | 22.25 |
| ATOM | 584 | NZ  | LYS | 1536 | -7.484 | 4.541   | 7.713  | 1.00 | 23.40 |
| ATOM | 588 | C   | LYS | 1536 | -2.785 | -0.699  | 5.423  | 1.00 | 24.52 |
| ATOM | 589 | O   | LYS | 1536 | -3.069 | -1.889  | 5.403  | 1.00 | 26.61 |
| ATOM | 590 | N   | MET | 1537 | -2.183 | -0.093  | 4.411  | 1.00 | 27.12 |
| ATOM | 592 | CA  | MET | 1537 | -1.843 | -0.815  | 3.194  | 1.00 | 28.06 |
| ATOM | 593 | CB  | MET | 1537 | -1.269 | 0.147   | 2.147  | 1.00 | 30.36 |
| ATOM | 594 | CG  | MET | 1537 | -2.265 | 1.164   | 1.591  | 1.00 | 36.31 |
| ATOM | 595 | SD  | MET | 1537 | -3.699 | 0.444   | 0.727  | 1.00 | 42.19 |
| ATOM | 596 | CE  | MET | 1537 | -2.912 | -0.057  | -0.793 | 1.00 | 36.22 |
| ATOM | 597 | C   | MET | 1537 | -0.857 | -1.952  | 3.447  | 1.00 | 26.98 |
| ATOM | 598 | O   | MET | 1537 | -1.060 | -3.065  | 2.963  | 1.00 | 25.34 |
| ATOM | 599 | N   | ILE | 1538 | 0.188  | -1.678  | 4.229  | 1.00 | 27.69 |
| ATOM | 601 | CA  | ILE | 1538 | 1.234  | -2.674  | 4.535  | 1.00 | 25.39 |
| ATOM | 602 | CB  | ILE | 1538 | 2.454  | -2.006  | 5.255  | 1.00 | 24.42 |
| ATOM | 603 | CG2 | ILE | 1538 | 3.424  | -3.051  | 5.811  | 1.00 | 25.28 |
| ATOM | 604 | CG1 | ILE | 1538 | 3.223  | -1.131  | 4.269  | 1.00 | 23.88 |
| ATOM | 605 | CD1 | ILE | 1538 | 4.373  | -0.372  | 4.901  | 1.00 | 27.19 |
| ATOM | 606 | C   | ILE | 1538 | 0.760  | -3.922  | 5.292  | 1.00 | 25.59 |
| ATOM | 607 | O   | ILE | 1538 | 1.242  | -5.033  | 5.035  | 1.00 | 26.11 |
| ATOM | 608 | N   | GLY | 1539 | -0.193 | -3.767  | 6.208  | 1.00 | 26.13 |
| ATOM | 610 | CA  | GLY | 1539 | -0.661 | -4.940  | 6.934  | 1.00 | 25.25 |
| ATOM | 611 | C   | GLY | 1539 | 0.191  | -5.280  | 8.149  | 1.00 | 26.77 |
| ATOM | 612 | O   | GLY | 1539 | 1.214  | -4.637  | 8.414  | 1.00 | 25.42 |
| ATOM | 613 | N   | LYS | 1540 | -0.204 | -6.327  | 8.862  | 1.00 | 25.62 |
| ATOM | 615 | CA  | LYS | 1540 | 0.467  | -6.716  | 10.092 | 1.00 | 26.38 |
| ATOM | 616 | CB  | LYS | 1540 | -0.552 | -7.283  | 11.084 | 1.00 | 27.15 |
| ATOM | 617 | CG  | LYS | 1540 | -1.573 | -6.303  | 11.550 | 1.00 | 34.23 |
| ATOM | 618 | CD  | LYS | 1540 | -2.528 | -6.943  | 12.546 | 1.00 | 40.69 |
| ATOM | 619 | CE  | LYS | 1540 | -3.559 | -5.927  | 13.057 | 1.00 | 44.08 |
| ATOM | 620 | NZ  | LYS | 1540 | -2.956 | -4.800  | 13.833 | 1.00 | 44.05 |
| ATOM | 624 | C   | LYS | 1540 | 1.609  | -7.705  | 10.014 | 1.00 | 24.37 |
| ATOM | 625 | O   | LYS | 1540 | 1.627  | -8.600  | 9.181  | 1.00 | 26.12 |
| ATOM | 626 | N   | HIS | 1541 | 2.545  | -7.538  | 10.936 | 1.00 | 24.41 |
| ATOM | 628 | CA  | HIS | 1541 | 3.666  | -8.440  | 11.091 | 1.00 | 25.41 |
| ATOM | 629 | CB  | HIS | 1541 | 4.772  | -8.228  | 10.057 | 1.00 | 21.88 |
| ATOM | 630 | CG  | HIS | 1541 | 5.798  | -9.320  | 10.068 | 1.00 | 22.68 |
| ATOM | 631 | CD2 | HIS | 1541 | 5.823  | -10.522 | 9.444  | 1.00 | 21.40 |
| ATOM | 632 | ND1 | HIS | 1541 | 6.939  | -9.268  | 10.843 | 1.00 | 22.12 |
| ATOM | 634 | CE1 | HIS | 1541 | 7.619  | -10.389 | 10.697 | 1.00 | 24.78 |
| ATOM | 635 | NE2 | HIS | 1541 | 6.966  | -11.167 | 9.854  | 1.00 | 27.00 |
| ATOM | 637 | C   | HIS | 1541 | 4.234  | -8.328  | 12.494 | 1.00 | 25.47 |
| ATOM | 638 | O   | HIS | 1541 | 4.364  | -7.239  | 13.050 | 1.00 | 26.77 |
| ATOM | 639 | N   | LYS | 1542 | 4.560  | -9.476  | 13.063 | 1.00 | 26.38 |
| ATOM | 641 | CA  | LYS | 1542 | 5.127  | -9.552  | 14.401 | 1.00 | 30.07 |
| ATOM | 642 | CB  | LYS | 1542 | 5.515  | -11.003 | 14.692 | 1.00 | 31.38 |
| ATOM | 643 | CG  | LYS | 1542 | 6.061  | -11.252 | 16.077 | 1.00 | 42.79 |
| ATOM | 644 | CD  | LYS | 1542 | 6.289  | -12.735 | 16.294 | 1.00 | 50.84 |
| ATOM | 645 | CE  | LYS | 1542 | 7.041  | -13.374 | 15.114 | 1.00 | 56.75 |
| ATOM | 646 | NZ  | LYS | 1542 | 7.511  | -14.763 | 15.424 | 1.00 | 61.29 |
| ATOM | 650 | C   | LYS | 1542 | 6.342  | -8.652  | 14.624 | 1.00 | 27.65 |
| ATOM | 651 | O   | LYS | 1542 | 6.519  | -8.113  | 15.711 | 1.00 | 26.83 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 652 | N   | ASN | 1543 | 7.146  | -8.445  | 13.585 | 1.00 | 27.20 |
| ATOM | 654 | CA  | ASN | 1543 | 8.354  | -7.642  | 13.735 | 1.00 | 25.50 |
| ATOM | 655 | CB  | ASN | 1543 | 9.578  | -8.431  | 13.260 | 1.00 | 25.59 |
| ATOM | 656 | CG  | ASN | 1543 | 9.712  | -9.767  | 13.974 | 1.00 | 22.64 |
| ATOM | 657 | OD1 | ASN | 1543 | 9.522  | -10.821 | 13.371 | 1.00 | 26.76 |
| ATOM | 658 | ND2 | ASN | 1543 | 9.970  | -9.727  | 15.273 | 1.00 | 25.56 |
| ATOM | 661 | C   | ASN | 1543 | 8.374  | -6.213  | 13.226 | 1.00 | 25.48 |
| ATOM | 662 | O   | ASN | 1543 | 9.417  | -5.692  | 12.842 | 1.00 | 24.58 |
| ATOM | 663 | N   | ILE | 1544 | 7.209  | -5.575  | 13.244 | 1.00 | 24.60 |
| ATOM | 665 | CA  | ILE | 1544 | 7.065  | -4.177  | 12.868 | 1.00 | 22.32 |
| ATOM | 666 | CB  | ILE | 1544 | 6.524  | -3.972  | 11.409 | 1.00 | 25.82 |
| ATOM | 667 | CG2 | ILE | 1544 | 7.401  | -4.720  | 10.403 | 1.00 | 24.24 |
| ATOM | 668 | CG1 | ILE | 1544 | 5.057  | -4.411  | 11.279 | 1.00 | 26.04 |
| ATOM | 669 | CD1 | ILE | 1544 | 4.446  | -4.121  | 9.901  | 1.00 | 23.20 |
| ATOM | 670 | C   | ILE | 1544 | 6.075  | -3.598  | 13.881 | 1.00 | 22.37 |
| ATOM | 671 | O   | ILE | 1544 | 5.364  | -4.345  | 14.559 | 1.00 | 21.68 |
| ATOM | 672 | N   | ILE | 1545 | 6.111  | -2.290  | 14.076 | 1.00 | 23.72 |
| ATOM | 674 | CA  | ILE | 1545 | 5.169  | -1.650  | 14.989 | 1.00 | 25.92 |
| ATOM | 675 | CB  | ILE | 1545 | 5.602  | -0.199  | 15.364 | 1.00 | 27.24 |
| ATOM | 676 | CG2 | ILE | 1545 | 4.452  | 0.554   | 16.035 | 1.00 | 22.76 |
| ATOM | 677 | CG1 | ILE | 1545 | 6.839  | -0.219  | 16.285 | 1.00 | 25.57 |
| ATOM | 678 | CD1 | ILE | 1545 | 6.591  | -0.797  | 17.686 | 1.00 | 24.66 |
| ATOM | 679 | C   | ILE | 1545 | 3.877  | -1.612  | 14.179 | 1.00 | 26.03 |
| ATOM | 680 | O   | ILE | 1545 | 3.823  | -0.988  | 13.122 | 1.00 | 25.70 |
| ATOM | 681 | N   | ASN | 1546 | 2.849  | -2.293  | 14.669 | 1.00 | 24.79 |
| ATOM | 683 | CA  | ASN | 1546 | 1.577  | -2.354  | 13.956 | 1.00 | 25.51 |
| ATOM | 684 | CB  | ASN | 1546 | 0.922  | -3.727  | 14.137 | 1.00 | 25.17 |
| ATOM | 685 | CG  | ASN | 1546 | 1.730  | -4.839  | 13.539 | 1.00 | 21.67 |
| ATOM | 686 | OD1 | ASN | 1546 | 1.856  | -4.947  | 12.329 | 1.00 | 24.29 |
| ATOM | 687 | ND2 | ASN | 1546 | 2.278  | -5.686  | 14.384 | 1.00 | 22.24 |
| ATOM | 690 | C   | ASN | 1546 | 0.578  | -1.276  | 14.349 | 1.00 | 26.85 |
| ATOM | 691 | O   | ASN | 1546 | 0.630  | -0.724  | 15.453 | 1.00 | 28.67 |
| ATOM | 692 | N   | LEU | 1547 | -0.301 | -0.956  | 13.407 | 1.00 | 27.70 |
| ATOM | 694 | CA  | LEU | 1547 | -1.357 | 0.019   | 13.622 | 1.00 | 27.64 |
| ATOM | 695 | CB  | LEU | 1547 | -1.945 | 0.481   | 12.284 | 1.00 | 24.87 |
| ATOM | 696 | CG  | LEU | 1547 | -3.173 | 1.400   | 12.337 | 1.00 | 23.25 |
| ATOM | 697 | CD1 | LEU | 1547 | -2.790 | 2.763   | 12.929 | 1.00 | 23.76 |
| ATOM | 698 | CD2 | LEU | 1547 | -3.757 | 1.569   | 10.923 | 1.00 | 23.47 |
| ATOM | 699 | C   | LEU | 1547 | -2.415 | -0.771  | 14.396 | 1.00 | 27.27 |
| ATOM | 700 | O   | LEU | 1547 | -2.663 | -1.952  | 14.103 | 1.00 | 25.27 |
| ATOM | 701 | N   | LEU | 1548 | -3.000 | -0.130  | 15.400 | 1.00 | 27.94 |
| ATOM | 703 | CA  | LEU | 1548 | -4.017 | -0.770  | 16.223 | 1.00 | 26.98 |
| ATOM | 704 | CB  | LEU | 1548 | -3.623 | -0.735  | 17.708 | 1.00 | 24.65 |
| ATOM | 705 | CG  | LEU | 1548 | -2.327 | -1.450  | 18.108 | 1.00 | 25.38 |
| ATOM | 706 | CD1 | LEU | 1548 | -2.189 | -1.428  | 19.613 | 1.00 | 25.73 |
| ATOM | 707 | CD2 | LEU | 1548 | -2.337 | -2.886  | 17.621 | 1.00 | 23.92 |
| ATOM | 708 | C   | LEU | 1548 | -5.369 | -0.113  | 16.042 | 1.00 | 26.65 |
| ATOM | 709 | O   | LEU | 1548 | -6.392 | -0.752  | 16.238 | 1.00 | 27.11 |
| ATOM | 710 | N   | GLY | 1549 | -5.378 | 1.163   | 15.684 | 1.00 | 25.04 |
| ATOM | 712 | CA  | GLY | 1549 | -6.643 | 1.855   | 15.516 | 1.00 | 25.47 |
| ATOM | 713 | C   | GLY | 1549 | -6.417 | 3.336   | 15.367 | 1.00 | 26.23 |
| ATOM | 714 | O   | GLY | 1549 | -5.267 | 3.781   | 15.287 | 1.00 | 28.41 |
| ATOM | 715 | N   | ALA | 1550 | -7.501 | 4.104   | 15.349 | 1.00 | 25.49 |
| ATOM | 717 | CA  | ALA | 1550 | -7.408 | 5.550   | 15.198 | 1.00 | 24.81 |

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|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 718 | CB  | ALA | 1550 | -7.176  | 5.913  | 13.724 | 1.00 | 21.79 |
| ATOM | 719 | C   | ALA | 1550 | -8.645  | 6.271  | 15.691 | 1.00 | 25.51 |
| ATOM | 720 | O   | ALA | 1550 | -9.738  | 5.702  | 15.726 | 1.00 | 24.09 |
| ATOM | 721 | N   | CYS | 1551 | -8.440  | 7.527  | 16.080 | 1.00 | 24.90 |
| ATOM | 723 | CA  | CYS | 1551 | -9.492  | 8.438  | 16.511 | 1.00 | 26.80 |
| ATOM | 724 | CB  | CYS | 1551 | -9.243  | 8.932  | 17.944 | 1.00 | 26.32 |
| ATOM | 725 | SG  | CYS | 1551 | -9.333  | 7.655  | 19.223 | 1.00 | 32.31 |
| ATOM | 726 | C   | CYS | 1551 | -9.341  | 9.585  | 15.502 | 1.00 | 28.31 |
| ATOM | 727 | O   | CYS | 1551 | -8.361  | 10.338 | 15.537 | 1.00 | 28.42 |
| ATOM | 728 | N   | THR | 1552 | -10.261 | 9.660  | 14.547 | 1.00 | 28.38 |
| ATOM | 730 | CA  | THR | 1552 | -10.198 | 10.671 | 13.498 | 1.00 | 31.26 |
| ATOM | 731 | CB  | THR | 1552 | -10.159 | 9.977  | 12.095 | 1.00 | 30.07 |
| ATOM | 732 | OG1 | THR | 1552 | -11.406 | 9.309  | 11.836 | 1.00 | 29.64 |
| ATOM | 734 | CG2 | THR | 1552 | -9.044  | 8.945  | 12.053 | 1.00 | 28.65 |
| ATOM | 735 | C   | THR | 1552 | -11.355 | 11.662 | 13.509 | 1.00 | 33.31 |
| ATOM | 736 | O   | THR | 1552 | -11.295 | 12.722 | 12.874 | 1.00 | 31.94 |
| ATOM | 737 | N   | GLN | 1553 | -12.420 | 11.309 | 14.214 | 1.00 | 36.09 |
| ATOM | 739 | CA  | GLN | 1553 | -13.598 | 12.158 | 14.245 | 1.00 | 39.26 |
| ATOM | 740 | CB  | GLN | 1553 | -14.864 | 11.299 | 14.145 | 1.00 | 36.61 |
| ATOM | 741 | CG  | GLN | 1553 | -14.932 | 10.436 | 12.881 | 1.00 | 37.72 |
| ATOM | 742 | CD  | GLN | 1553 | -14.762 | 11.247 | 11.601 | 1.00 | 38.41 |
| ATOM | 743 | OE1 | GLN | 1553 | -15.491 | 12.210 | 11.363 | 1.00 | 37.88 |
| ATOM | 744 | NE2 | GLN | 1553 | -13.798 | 10.858 | 10.770 | 1.00 | 37.67 |
| ATOM | 747 | C   | GLN | 1553 | -13.671 | 13.079 | 15.451 | 1.00 | 41.28 |
| ATOM | 748 | O   | GLN | 1553 | -13.150 | 12.758 | 16.513 | 1.00 | 41.37 |
| ATOM | 749 | N   | ASP | 1554 | -14.282 | 14.246 | 15.243 | 1.00 | 44.93 |
| ATOM | 751 | CA  | ASP | 1554 | -14.487 | 15.254 | 16.281 | 1.00 | 48.05 |
| ATOM | 752 | CB  | ASP | 1554 | -15.828 | 15.009 | 16.975 | 1.00 | 50.80 |
| ATOM | 753 | CG  | ASP | 1554 | -17.007 | 15.281 | 16.067 | 1.00 | 56.88 |
| ATOM | 754 | OD1 | ASP | 1554 | -17.921 | 16.019 | 16.491 | 1.00 | 63.89 |
| ATOM | 755 | OD2 | ASP | 1554 | -17.016 | 14.776 | 14.925 | 1.00 | 58.98 |
| ATOM | 756 | C   | ASP | 1554 | -13.367 | 15.366 | 17.316 | 1.00 | 48.04 |
| ATOM | 757 | O   | ASP | 1554 | -13.556 | 15.056 | 18.502 | 1.00 | 48.73 |
| ATOM | 758 | N   | GLY | 1555 | -12.205 | 15.819 | 16.860 | 1.00 | 44.30 |
| ATOM | 760 | CA  | GLY | 1555 | -11.080 | 15.960 | 17.756 | 1.00 | 42.32 |
| ATOM | 761 | C   | GLY | 1555 | -9.761  | 15.713 | 17.052 | 1.00 | 40.69 |
| ATOM | 762 | O   | GLY | 1555 | -9.740  | 15.465 | 15.848 | 1.00 | 40.71 |
| ATOM | 763 | N   | PRO | 1556 | -8.644  | 15.776 | 17.782 | 1.00 | 39.49 |
| ATOM | 764 | CD  | PRO | 1556 | -8.585  | 15.983 | 19.235 | 1.00 | 40.36 |
| ATOM | 765 | CA  | PRO | 1556 | -7.298  | 15.566 | 17.250 | 1.00 | 38.37 |
| ATOM | 766 | CB  | PRO | 1556 | -6.405  | 15.771 | 18.470 | 1.00 | 38.47 |
| ATOM | 767 | CG  | PRO | 1556 | -7.226  | 16.573 | 19.388 | 1.00 | 41.77 |
| ATOM | 768 | C   | PRO | 1556 | -7.140  | 14.154 | 16.746 | 1.00 | 36.92 |
| ATOM | 769 | O   | PRO | 1556 | -7.606  | 13.208 | 17.371 | 1.00 | 37.04 |
| ATOM | 770 | N   | LEU | 1557 | -6.447  | 14.017 | 15.627 | 1.00 | 36.70 |
| ATOM | 772 | CA  | LEU | 1557 | -6.201  | 12.719 | 15.037 | 1.00 | 34.81 |
| ATOM | 773 | CB  | LEU | 1557 | -5.528  | 12.885 | 13.664 | 1.00 | 32.49 |
| ATOM | 774 | CG  | LEU | 1557 | -5.004  | 11.623 | 12.954 | 1.00 | 30.83 |
| ATOM | 775 | CD1 | LEU | 1557 | -6.146  | 10.655 | 12.664 | 1.00 | 26.28 |
| ATOM | 776 | CD2 | LEU | 1557 | -4.283  | 12.014 | 11.672 | 1.00 | 25.55 |
| ATOM | 777 | C   | LEU | 1557 | -5.290  | 11.925 | 15.961 | 1.00 | 33.63 |
| ATOM | 778 | O   | LEU | 1557 | -4.229  | 12.410 | 16.369 | 1.00 | 33.62 |
| ATOM | 779 | N   | TYR | 1558 | -5.718  | 10.724 | 16.319 | 1.00 | 31.97 |
| ATOM | 781 | CA  | TYR | 1558 | -4.902  | 9.863  | 17.147 | 1.00 | 31.81 |



|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 782 | CB  | TYR | 1558 | -5.614 | 9.500  | 18.462 | 1.00 | 33.55 |
| ATOM | 783 | CG  | TYR | 1558 | -5.710 | 10.638 | 19.461 | 1.00 | 35.33 |
| ATOM | 784 | CD1 | TYR | 1558 | -6.644 | 10.608 | 20.499 | 1.00 | 35.68 |
| ATOM | 785 | CE1 | TYR | 1558 | -6.757 | 11.670 | 21.394 | 1.00 | 38.60 |
| ATOM | 786 | CD2 | TYR | 1558 | -4.883 | 11.759 | 19.349 | 1.00 | 38.62 |
| ATOM | 787 | CE2 | TYR | 1558 | -4.985 | 12.824 | 20.235 | 1.00 | 40.33 |
| ATOM | 788 | CZ  | TYR | 1558 | -5.924 | 12.781 | 21.254 | 1.00 | 41.70 |
| ATOM | 789 | OH  | TYR | 1558 | -6.040 | 13.867 | 22.104 | 1.00 | 42.66 |
| ATOM | 791 | C   | TYR | 1558 | -4.607 | 8.604  | 16.345 | 1.00 | 31.08 |
| ATOM | 792 | O   | TYR | 1558 | -5.527 | 7.937  | 15.857 | 1.00 | 31.28 |
| ATOM | 793 | N   | VAL | 1559 | -3.328 | 8.336  | 16.116 | 1.00 | 28.34 |
| ATOM | 795 | CA  | VAL | 1559 | -2.934 | 7.132  | 15.403 | 1.00 | 26.39 |
| ATOM | 796 | CB  | VAL | 1559 | -1.830 | 7.401  | 14.364 | 1.00 | 29.17 |
| ATOM | 797 | CG1 | VAL | 1559 | -1.463 | 6.103  | 13.648 | 1.00 | 26.25 |
| ATOM | 798 | CG2 | VAL | 1559 | -2.297 | 8.461  | 13.360 | 1.00 | 29.56 |
| ATOM | 799 | C   | VAL | 1559 | -2.411 | 6.226  | 16.498 | 1.00 | 25.14 |
| ATOM | 800 | O   | VAL | 1559 | -1.396 | 6.522  | 17.120 | 1.00 | 28.04 |
| ATOM | 801 | N   | ILE | 1560 | -3.164 | 5.171  | 16.783 | 1.00 | 25.28 |
| ATOM | 803 | CA  | ILE | 1560 | -2.832 | 4.208  | 17.831 | 1.00 | 24.81 |
| ATOM | 804 | CB  | ILE | 1560 | -4.133 | 3.669  | 18.496 | 1.00 | 24.63 |
| ATOM | 805 | CG2 | ILE | 1560 | -3.790 | 2.812  | 19.728 | 1.00 | 20.93 |
| ATOM | 806 | CG1 | ILE | 1560 | -5.044 | 4.854  | 18.869 | 1.00 | 22.94 |
| ATOM | 807 | CD1 | ILE | 1560 | -6.499 | 4.502  | 19.028 | 1.00 | 25.34 |
| ATOM | 808 | C   | ILE | 1560 | -1.994 | 3.051  | 17.286 | 1.00 | 26.38 |
| ATOM | 809 | O   | ILE | 1560 | -2.429 | 2.301  | 16.398 | 1.00 | 26.14 |
| ATOM | 810 | N   | VAL | 1561 | -0.782 | 2.911  | 17.809 | 1.00 | 27.31 |
| ATOM | 812 | CA  | VAL | 1561 | 0.112  | 1.852  | 17.359 | 1.00 | 27.32 |
| ATOM | 813 | CB  | VAL | 1561 | 1.309  | 2.435  | 16.527 | 1.00 | 25.01 |
| ATOM | 814 | CG1 | VAL | 1561 | 0.785  | 3.220  | 15.338 | 1.00 | 19.39 |
| ATOM | 815 | CG2 | VAL | 1561 | 2.170  | 3.340  | 17.397 | 1.00 | 26.08 |
| ATOM | 816 | C   | VAL | 1561 | 0.615  | 1.029  | 18.548 | 1.00 | 25.89 |
| ATOM | 817 | O   | VAL | 1561 | 0.364  | 1.373  | 19.713 | 1.00 | 25.64 |
| ATOM | 818 | N   | GLU | 1562 | 1.288  | -0.076 | 18.250 | 1.00 | 24.49 |
| ATOM | 820 | CA  | GLU | 1562 | 1.806  | -0.949 | 19.284 | 1.00 | 25.00 |
| ATOM | 821 | CB  | GLU | 1562 | 2.357  | -2.231 | 18.677 | 1.00 | 23.69 |
| ATOM | 822 | CG  | GLU | 1562 | 1.272  | -3.170 | 18.219 | 1.00 | 24.29 |
| ATOM | 823 | CD  | GLU | 1562 | 1.814  | -4.393 | 17.514 | 1.00 | 27.65 |
| ATOM | 824 | OE1 | GLU | 1562 | 1.218  | -5.480 | 17.649 | 1.00 | 29.50 |
| ATOM | 825 | OE2 | GLU | 1562 | 2.832  | -4.270 | 16.807 | 1.00 | 32.34 |
| ATOM | 826 | C   | GLU | 1562 | 2.840  | -0.279 | 20.170 | 1.00 | 27.27 |
| ATOM | 827 | O   | GLU | 1562 | 3.596  | 0.576  | 19.729 | 1.00 | 26.18 |
| ATOM | 828 | N   | TYR | 1563 | 2.822  | -0.663 | 21.441 | 1.00 | 30.39 |
| ATOM | 830 | CA  | TYR | 1563 | 3.715  | -0.121 | 22.454 | 1.00 | 32.48 |
| ATOM | 831 | CB  | TYR | 1563 | 2.932  | 0.132  | 23.750 | 1.00 | 33.91 |
| ATOM | 832 | CG  | TYR | 1563 | 3.788  | 0.535  | 24.928 | 1.00 | 34.93 |
| ATOM | 833 | CD1 | TYR | 1563 | 4.606  | 1.664  | 24.871 | 1.00 | 34.50 |
| ATOM | 834 | CE1 | TYR | 1563 | 5.374  | 2.051  | 25.967 | 1.00 | 37.77 |
| ATOM | 835 | CD2 | TYR | 1563 | 3.758  | -0.201 | 26.108 | 1.00 | 33.54 |
| ATOM | 836 | CE2 | TYR | 1563 | 4.519  | 0.171  | 27.205 | 1.00 | 34.94 |
| ATOM | 837 | CZ  | TYR | 1563 | 5.321  | 1.296  | 27.128 | 1.00 | 37.22 |
| ATOM | 838 | OH  | TYR | 1563 | 6.087  | 1.648  | 28.206 | 1.00 | 45.36 |
| ATOM | 840 | C   | TYR | 1563 | 4.896  | -1.039 | 22.730 | 1.00 | 31.53 |
| ATOM | 841 | O   | TYR | 1563 | 4.737  | -2.252 | 22.895 | 1.00 | 30.43 |
| ATOM | 842 | N   | ALA | 1564 | 6.082  | -0.444 | 22.761 | 1.00 | 32.28 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 844 | CA  | ALA | 1564 | 7.326  | -1.167 | 23.026 | 1.00 | 32.59 |
| ATOM | 845 | CB  | ALA | 1564 | 8.308  | -0.957 | 21.863 | 1.00 | 30.11 |
| ATOM | 846 | C   | ALA | 1564 | 7.897  | -0.608 | 24.334 | 1.00 | 31.81 |
| ATOM | 847 | O   | ALA | 1564 | 8.563  | 0.427  | 24.345 | 1.00 | 34.11 |
| ATOM | 848 | N   | SER | 1565 | 7.619  | -1.296 | 25.434 | 1.00 | 34.09 |
| ATOM | 850 | CA  | SER | 1565 | 8.039  | -0.853 | 26.763 | 1.00 | 35.05 |
| ATOM | 851 | CB  | SER | 1565 | 7.400  | -1.725 | 27.829 | 1.00 | 30.13 |
| ATOM | 852 | OG  | SER | 1565 | 7.689  | -3.084 | 27.579 | 1.00 | 38.17 |
| ATOM | 854 | C   | SER | 1565 | 9.526  | -0.769 | 27.041 | 1.00 | 35.03 |
| ATOM | 855 | O   | SER | 1565 | 9.947  | -0.001 | 27.902 | 1.00 | 37.12 |
| ATOM | 856 | N   | LYS | 1566 | 10.321 | -1.557 | 26.330 | 1.00 | 34.55 |
| ATOM | 858 | CA  | LYS | 1566 | 11.756 | -1.559 | 26.562 | 1.00 | 33.48 |
| ATOM | 859 | CB  | LYS | 1566 | 12.291 | -2.990 | 26.508 | 1.00 | 31.90 |
| ATOM | 860 | CG  | LYS | 1566 | 11.674 | -3.865 | 27.586 | 1.00 | 28.63 |
| ATOM | 861 | CD  | LYS | 1566 | 12.162 | -5.287 | 27.508 | 1.00 | 34.97 |
| ATOM | 862 | CE  | LYS | 1566 | 11.763 | -6.042 | 28.761 | 1.00 | 36.82 |
| ATOM | 863 | NZ  | LYS | 1566 | 12.288 | -7.433 | 28.748 | 1.00 | 41.32 |
| ATOM | 867 | C   | LYS | 1566 | 12.567 | -0.613 | 25.691 | 1.00 | 34.98 |
| ATOM | 868 | O   | LYS | 1566 | 13.785 | -0.740 | 25.607 | 1.00 | 38.03 |
| ATOM | 869 | N   | GLY | 1567 | 11.892 | 0.338  | 25.049 | 1.00 | 36.00 |
| ATOM | 871 | CA  | GLY | 1567 | 12.582 | 1.322  | 24.222 | 1.00 | 34.14 |
| ATOM | 872 | C   | GLY | 1567 | 13.245 | 0.864  | 22.933 | 1.00 | 32.01 |
| ATOM | 873 | O   | GLY | 1567 | 12.975 | -0.222 | 22.439 | 1.00 | 31.95 |
| ATOM | 874 | N   | ASN | 1568 | 14.091 | 1.719  | 22.360 | 1.00 | 33.51 |
| ATOM | 876 | CA  | ASN | 1568 | 14.774 | 1.375  | 21.121 | 1.00 | 34.20 |
| ATOM | 877 | CB  | ASN | 1568 | 15.203 | 2.627  | 20.332 | 1.00 | 34.07 |
| ATOM | 878 | CG  | ASN | 1568 | 16.420 | 3.321  | 20.910 | 1.00 | 35.09 |
| ATOM | 879 | OD1 | ASN | 1568 | 17.453 | 2.709  | 21.156 | 1.00 | 34.36 |
| ATOM | 880 | ND2 | ASN | 1568 | 16.317 | 4.624  | 21.066 | 1.00 | 38.38 |
| ATOM | 883 | C   | ASN | 1568 | 15.927 | 0.401  | 21.325 | 1.00 | 33.38 |
| ATOM | 884 | O   | ASN | 1568 | 16.490 | 0.315  | 22.414 | 1.00 | 34.93 |
| ATOM | 885 | N   | LEU | 1569 | 16.276 | -0.317 | 20.263 | 1.00 | 31.11 |
| ATOM | 887 | CA  | LEU | 1569 | 17.333 | -1.316 | 20.298 | 1.00 | 30.44 |
| ATOM | 888 | CB  | LEU | 1569 | 17.437 | -2.008 | 18.928 | 1.00 | 29.46 |
| ATOM | 889 | CG  | LEU | 1569 | 18.438 | -3.148 | 18.741 | 1.00 | 29.01 |
| ATOM | 890 | CD1 | LEU | 1569 | 18.285 | -4.219 | 19.840 | 1.00 | 28.81 |
| ATOM | 891 | CD2 | LEU | 1569 | 18.263 | -3.740 | 17.338 | 1.00 | 26.62 |
| ATOM | 892 | C   | LEU | 1569 | 18.706 | -0.805 | 20.762 | 1.00 | 30.16 |
| ATOM | 893 | O   | LEU | 1569 | 19.400 | -1.501 | 21.496 | 1.00 | 27.32 |
| ATOM | 894 | N   | ARG | 1570 | 19.097 | 0.396  | 20.344 | 1.00 | 30.74 |
| ATOM | 896 | CA  | ARG | 1570 | 20.386 | 0.951  | 20.758 | 1.00 | 33.72 |
| ATOM | 897 | CB  | ARG | 1570 | 20.597 | 2.349  | 20.160 | 1.00 | 32.82 |
| ATOM | 898 | CG  | ARG | 1570 | 21.873 | 3.009  | 20.662 | 1.00 | 36.90 |
| ATOM | 899 | CD  | ARG | 1570 | 21.966 | 4.481  | 20.332 | 1.00 | 39.32 |
| ATOM | 900 | NE  | ARG | 1570 | 20.749 | 5.222  | 20.664 | 1.00 | 50.32 |
| ATOM | 902 | CZ  | ARG | 1570 | 20.376 | 5.600  | 21.889 | 1.00 | 51.90 |
| ATOM | 903 | NH1 | ARG | 1570 | 21.118 | 5.316  | 22.960 | 1.00 | 50.15 |
| ATOM | 906 | NH2 | ARG | 1570 | 19.246 | 6.284  | 22.033 | 1.00 | 53.67 |
| ATOM | 909 | C   | ARG | 1570 | 20.434 | 1.022  | 22.298 | 1.00 | 35.75 |
| ATOM | 910 | O   | ARG | 1570 | 21.324 | 0.444  | 22.939 | 1.00 | 35.67 |
| ATOM | 911 | N   | GLU | 1571 | 19.444 | 1.695  | 22.880 | 1.00 | 35.56 |
| ATOM | 913 | CA  | GLU | 1571 | 19.331 | 1.835  | 24.328 | 1.00 | 36.50 |
| ATOM | 914 | CB  | GLU | 1571 | 18.055 | 2.607  | 24.667 | 1.00 | 39.08 |
| ATOM | 915 | CG  | GLU | 1571 | 18.061 | 4.056  | 24.208 | 1.00 | 46.75 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 916 | CD  | GLU | 1571 | 16.694 | 4.721  | 24.311 | 1.00 | 51.36 |
| ATOM | 917 | OE1 | GLU | 1571 | 15.676 | 3.996  | 24.417 | 1.00 | 55.22 |
| ATOM | 918 | OE2 | GLU | 1571 | 16.635 | 5.972  | 24.267 | 1.00 | 53.59 |
| ATOM | 919 | C   | GLU | 1571 | 19.314 | 0.469  | 25.022 | 1.00 | 34.82 |
| ATOM | 920 | O   | GLU | 1571 | 20.018 | 0.242  | 26.013 | 1.00 | 35.05 |
| ATOM | 921 | N   | TYR | 1572 | 18.520 | -0.441 | 24.469 | 1.00 | 33.35 |
| ATOM | 923 | CA  | TYR | 1572 | 18.366 | -1.796 | 24.986 | 1.00 | 31.83 |
| ATOM | 924 | CB  | TYR | 1572 | 17.365 | -2.544 | 24.102 | 1.00 | 30.77 |
| ATOM | 925 | CG  | TYR | 1572 | 17.170 | -4.008 | 24.408 | 1.00 | 28.50 |
| ATOM | 926 | CD1 | TYR | 1572 | 16.193 | -4.420 | 25.313 | 1.00 | 30.48 |
| ATOM | 927 | CE1 | TYR | 1572 | 15.977 | -5.760 | 25.574 | 1.00 | 30.97 |
| ATOM | 928 | CD2 | TYR | 1572 | 17.933 | -4.985 | 23.772 | 1.00 | 26.14 |
| ATOM | 929 | CE2 | TYR | 1572 | 17.725 | -6.329 | 24.027 | 1.00 | 26.21 |
| ATOM | 930 | CZ  | TYR | 1572 | 16.742 | -6.708 | 24.935 | 1.00 | 30.30 |
| ATOM | 931 | OH  | TYR | 1572 | 16.518 | -8.041 | 25.214 | 1.00 | 33.52 |
| ATOM | 933 | C   | TYR | 1572 | 19.692 | -2.556 | 25.044 | 1.00 | 34.83 |
| ATOM | 934 | O   | TYR | 1572 | 19.959 | -3.308 | 25.992 | 1.00 | 34.93 |
| ATOM | 935 | N   | LEU | 1573 | 20.517 | -2.370 | 24.020 | 1.00 | 34.34 |
| ATOM | 937 | CA  | LEU | 1573 | 21.803 | -3.053 | 23.961 | 1.00 | 35.38 |
| ATOM | 938 | CB  | LEU | 1573 | 22.357 | -3.027 | 22.531 | 1.00 | 32.71 |
| ATOM | 939 | CG  | LEU | 1573 | 21.669 | -3.891 | 21.464 | 1.00 | 29.16 |
| ATOM | 940 | CD1 | LEU | 1573 | 22.161 | -3.503 | 20.087 | 1.00 | 26.98 |
| ATOM | 941 | CD2 | LEU | 1573 | 21.932 | -5.351 | 21.710 | 1.00 | 28.85 |
| ATOM | 942 | C   | LEU | 1573 | 22.799 | -2.420 | 24.933 | 1.00 | 37.54 |
| ATOM | 943 | O   | LEU | 1573 | 23.511 | -3.123 | 25.659 | 1.00 | 36.67 |
| ATOM | 944 | N   | GLN | 1574 | 22.814 | -1.092 | 24.969 | 1.00 | 37.90 |
| ATOM | 946 | CA  | GLN | 1574 | 23.729 | -0.368 | 25.838 | 1.00 | 39.77 |
| ATOM | 947 | CB  | GLN | 1574 | 23.624 | 1.138  | 25.572 | 1.00 | 40.09 |
| ATOM | 948 | CG  | GLN | 1574 | 24.208 | 1.549  | 24.217 | 1.00 | 42.28 |
| ATOM | 949 | CD  | GLN | 1574 | 24.030 | 3.018  | 23.896 | 1.00 | 44.28 |
| ATOM | 950 | OE1 | GLN | 1574 | 23.362 | 3.755  | 24.615 | 1.00 | 47.55 |
| ATOM | 951 | NE2 | GLN | 1574 | 24.613 | 3.448  | 22.790 | 1.00 | 46.09 |
| ATOM | 954 | C   | GLN | 1574 | 23.490 | -0.697 | 27.310 | 1.00 | 40.75 |
| ATOM | 955 | O   | GLN | 1574 | 24.440 | -0.939 | 28.059 | 1.00 | 41.29 |
| ATOM | 956 | N   | ALA | 1575 | 22.220 | -0.783 | 27.696 | 1.00 | 40.10 |
| ATOM | 958 | CA  | ALA | 1575 | 21.842 | -1.088 | 29.069 | 1.00 | 38.81 |
| ATOM | 959 | CB  | ALA | 1575 | 20.349 | -0.819 | 29.273 | 1.00 | 35.69 |
| ATOM | 960 | C   | ALA | 1575 | 22.192 | -2.514 | 29.503 | 1.00 | 40.63 |
| ATOM | 961 | O   | ALA | 1575 | 22.098 | -2.843 | 30.690 | 1.00 | 43.39 |
| ATOM | 962 | N   | ARG | 1576 | 22.602 | -3.357 | 28.561 | 1.00 | 38.39 |
| ATOM | 964 | CA  | ARG | 1576 | 22.945 | -4.729 | 28.896 | 1.00 | 37.69 |
| ATOM | 965 | CB  | ARG | 1576 | 22.034 | -5.689 | 28.137 | 1.00 | 38.16 |
| ATOM | 966 | CG  | ARG | 1576 | 20.594 | -5.547 | 28.589 | 1.00 | 37.89 |
| ATOM | 967 | CD  | ARG | 1576 | 19.622 | -6.281 | 27.711 | 1.00 | 37.36 |
| ATOM | 968 | NE  | ARG | 1576 | 18.267 | -6.255 | 28.265 | 1.00 | 34.99 |
| ATOM | 970 | CZ  | ARG | 1576 | 17.565 | -5.150 | 28.484 | 1.00 | 36.94 |
| ATOM | 971 | NH1 | ARG | 1576 | 18.083 | -3.960 | 28.209 | 1.00 | 36.18 |
| ATOM | 974 | NH2 | ARG | 1576 | 16.310 | -5.237 | 28.909 | 1.00 | 40.93 |
| ATOM | 977 | C   | ARG | 1576 | 24.413 | -5.073 | 28.704 | 1.00 | 38.93 |
| ATOM | 978 | O   | ARG | 1576 | 24.801 | -6.249 | 28.699 | 1.00 | 39.75 |
| ATOM | 979 | N   | ARG | 1577 | 25.233 | -4.036 | 28.570 | 1.00 | 39.21 |
| ATOM | 981 | CA  | ARG | 1577 | 26.671 | -4.196 | 28.413 | 1.00 | 38.97 |
| ATOM | 982 | CB  | ARG | 1577 | 27.307 | -2.870 | 28.000 | 1.00 | 36.06 |
| ATOM | 983 | CG  | ARG | 1577 | 26.992 | -2.408 | 26.610 | 1.00 | 36.41 |

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|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 984  | CD  | ARG | 1577 | 27.695 | -1.094  | 26.337 | 1.00 | 36.17 |
| ATOM | 985  | NE  | ARG | 1577 | 27.776 | -0.806  | 24.907 | 1.00 | 38.45 |
| ATOM | 987  | CZ  | ARG | 1577 | 28.284 | 0.309   | 24.387 | 1.00 | 39.00 |
| ATOM | 988  | NH1 | ARG | 1577 | 28.764 | 1.262   | 25.175 | 1.00 | 38.88 |
| ATOM | 991  | NH2 | ARG | 1577 | 28.311 | 0.469   | 23.071 | 1.00 | 37.76 |
| ATOM | 994  | C   | ARG | 1577 | 27.247 | -4.571  | 29.772 | 1.00 | 40.59 |
| ATOM | 995  | O   | ARG | 1577 | 26.680 | -4.217  | 30.800 | 1.00 | 38.52 |
| ATOM | 996  | N   | PRO | 1578 | 28.358 | -5.327  | 29.796 | 1.00 | 43.19 |
| ATOM | 997  | CD  | PRO | 1578 | 29.077 | -5.980  | 28.692 | 1.00 | 44.84 |
| ATOM | 998  | CA  | PRO | 1578 | 28.952 | -5.692  | 31.088 | 1.00 | 45.06 |
| ATOM | 999  | CB  | PRO | 1578 | 30.065 | -6.673  | 30.689 | 1.00 | 44.86 |
| ATOM | 1000 | CG  | PRO | 1578 | 30.431 | -6.229  | 29.308 | 1.00 | 44.56 |
| ATOM | 1001 | C   | PRO | 1578 | 29.513 | -4.420  | 31.734 | 1.00 | 44.93 |
| ATOM | 1002 | O   | PRO | 1578 | 29.809 | -3.439  | 31.043 | 1.00 | 43.13 |
| ATOM | 1003 | N   | PRO | 1579 | 29.649 | -4.414  | 33.067 | 1.00 | 47.61 |
| ATOM | 1004 | CD  | PRO | 1579 | 29.315 | -5.492  | 34.012 | 1.00 | 48.39 |
| ATOM | 1005 | CA  | PRO | 1579 | 30.173 | -3.247  | 33.784 | 1.00 | 48.74 |
| ATOM | 1006 | CB  | PRO | 1579 | 30.138 | -3.706  | 35.238 | 1.00 | 49.73 |
| ATOM | 1007 | CG  | PRO | 1579 | 29.027 | -4.711  | 35.259 | 1.00 | 49.21 |
| ATOM | 1008 | C   | PRO | 1579 | 31.591 | -2.888  | 33.357 | 1.00 | 49.67 |
| ATOM | 1009 | O   | PRO | 1579 | 32.483 | -3.733  | 33.361 | 1.00 | 52.07 |
| ATOM | 1010 | N   | GLU | 1592 | 19.165 | -5.411  | 32.444 | 1.00 | 64.83 |
| ATOM | 1012 | CA  | GLU | 1592 | 20.603 | -5.147  | 32.491 | 1.00 | 64.82 |
| ATOM | 1013 | CB  | GLU | 1592 | 20.969 | -4.421  | 33.784 | 1.00 | 67.61 |
| ATOM | 1014 | C   | GLU | 1592 | 21.448 | -6.413  | 32.335 | 1.00 | 63.99 |
| ATOM | 1015 | O   | GLU | 1592 | 22.653 | -6.336  | 32.098 | 1.00 | 65.67 |
| ATOM | 1016 | N   | GLU | 1593 | 20.821 | -7.575  | 32.485 | 1.00 | 62.41 |
| ATOM | 1018 | CA  | GLU | 1593 | 21.534 | -8.844  | 32.342 | 1.00 | 61.23 |
| ATOM | 1019 | CB  | GLU | 1593 | 20.595 | -10.017 | 32.600 | 1.00 | 61.20 |
| ATOM | 1020 | C   | GLU | 1593 | 22.141 | -8.953  | 30.944 | 1.00 | 59.26 |
| ATOM | 1021 | O   | GLU | 1593 | 21.494 | -8.631  | 29.945 | 1.00 | 59.84 |
| ATOM | 1022 | N   | GLN | 1594 | 23.388 | -9.405  | 30.888 | 1.00 | 57.94 |
| ATOM | 1024 | CA  | GLN | 1594 | 24.101 | -9.558  | 29.625 | 1.00 | 54.91 |
| ATOM | 1025 | CB  | GLN | 1594 | 25.501 | -10.141 | 29.865 | 1.00 | 55.13 |
| ATOM | 1026 | CG  | GLN | 1594 | 26.439 | -9.252  | 30.679 | 1.00 | 56.93 |
| ATOM | 1027 | CD  | GLN | 1594 | 27.682 | -9.997  | 31.180 | 1.00 | 59.60 |
| ATOM | 1028 | OE1 | GLN | 1594 | 28.241 | -10.858 | 30.488 | 1.00 | 58.45 |
| ATOM | 1029 | NE2 | GLN | 1594 | 28.117 | -9.662  | 32.393 | 1.00 | 58.95 |
| ATOM | 1032 | C   | GLN | 1594 | 23.331 | -10.438 | 28.640 | 1.00 | 52.30 |
| ATOM | 1033 | O   | GLN | 1594 | 22.637 | -11.389 | 29.025 | 1.00 | 52.03 |
| ATOM | 1034 | N   | LEU | 1595 | 23.438 | -10.091 | 27.366 | 1.00 | 49.60 |
| ATOM | 1036 | CA  | LEU | 1595 | 22.782 | -10.836 | 26.308 | 1.00 | 45.16 |
| ATOM | 1037 | CB  | LEU | 1595 | 22.459 | -9.907  | 25.135 | 1.00 | 41.36 |
| ATOM | 1038 | CG  | LEU | 1595 | 21.463 | -8.815  | 25.523 | 1.00 | 39.43 |
| ATOM | 1039 | CD1 | LEU | 1595 | 21.617 | -7.583  | 24.644 | 1.00 | 36.21 |
| ATOM | 1040 | CD2 | LEU | 1595 | 20.060 | -9.389  | 25.480 | 1.00 | 34.91 |
| ATOM | 1041 | C   | LEU | 1595 | 23.747 | -11.900 | 25.858 | 1.00 | 43.30 |
| ATOM | 1042 | O   | LEU | 1595 | 24.953 | -11.675 | 25.841 | 1.00 | 43.62 |
| ATOM | 1043 | N   | SER | 1596 | 23.230 | -13.081 | 25.553 | 1.00 | 42.92 |
| ATOM | 1045 | CA  | SER | 1596 | 24.085 | -14.150 | 25.077 | 1.00 | 41.86 |
| ATOM | 1046 | CB  | SER | 1596 | 23.410 | -15.502 | 25.298 | 1.00 | 40.86 |
| ATOM | 1047 | OG  | SER | 1596 | 22.188 | -15.596 | 24.595 | 1.00 | 37.88 |
| ATOM | 1049 | C   | SER | 1596 | 24.322 | -13.914 | 23.587 | 1.00 | 41.59 |
| ATOM | 1050 | O   | SER | 1596 | 23.657 | -13.077 | 22.966 | 1.00 | 41.94 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1051 | N   | SER | 1597 | 25.275 | -14.637 | 23.018 | 1.00 | 39.60 |
| ATOM | 1053 | CA  | SER | 1597 | 25.557 | -14.518 | 21.603 | 1.00 | 39.74 |
| ATOM | 1054 | CB  | SER | 1597 | 26.729 | -15.409 | 21.223 | 1.00 | 41.38 |
| ATOM | 1055 | OG  | SER | 1597 | 27.824 | -15.147 | 22.077 | 1.00 | 50.59 |
| ATOM | 1057 | C   | SER | 1597 | 24.315 | -14.921 | 20.818 | 1.00 | 38.16 |
| ATOM | 1058 | O   | SER | 1597 | 24.036 | -14.353 | 19.769 | 1.00 | 38.03 |
| ATOM | 1059 | N   | LYS | 1598 | 23.560 | -15.891 | 21.327 | 1.00 | 36.40 |
| ATOM | 1061 | CA  | LYS | 1598 | 22.362 | -16.312 | 20.634 | 1.00 | 35.97 |
| ATOM | 1062 | CB  | LYS | 1598 | 21.791 | -17.594 | 21.228 | 1.00 | 36.69 |
| ATOM | 1063 | CG  | LYS | 1598 | 20.989 | -18.402 | 20.198 | 1.00 | 40.42 |
| ATOM | 1064 | CD  | LYS | 1598 | 20.164 | -19.499 | 20.838 | 1.00 | 40.37 |
| ATOM | 1065 | CE  | LYS | 1598 | 19.792 | -20.572 | 19.829 | 1.00 | 46.34 |
| ATOM | 1066 | NZ  | LYS | 1598 | 20.993 | -21.338 | 19.362 | 1.00 | 45.29 |
| ATOM | 1070 | C   | LYS | 1598 | 21.324 | -15.194 | 20.696 | 1.00 | 37.49 |
| ATOM | 1071 | O   | LYS | 1598 | 20.567 | -14.983 | 19.738 | 1.00 | 38.10 |
| ATOM | 1072 | N   | ASP | 1599 | 21.316 | -14.458 | 21.807 | 1.00 | 35.21 |
| ATOM | 1074 | CA  | ASP | 1599 | 20.380 | -13.352 | 21.983 | 1.00 | 34.02 |
| ATOM | 1075 | CB  | ASP | 1599 | 20.556 | -12.686 | 23.346 | 1.00 | 37.78 |
| ATOM | 1076 | CG  | ASP | 1599 | 19.970 | -13.493 | 24.483 | 1.00 | 40.05 |
| ATOM | 1077 | OD1 | ASP | 1599 | 20.270 | -13.143 | 25.642 | 1.00 | 42.73 |
| ATOM | 1078 | OD2 | ASP | 1599 | 19.204 | -14.450 | 24.235 | 1.00 | 42.39 |
| ATOM | 1079 | C   | ASP | 1599 | 20.633 | -12.306 | 20.922 | 1.00 | 32.84 |
| ATOM | 1080 | O   | ASP | 1599 | 19.694 | -11.779 | 20.311 | 1.00 | 30.59 |
| ATOM | 1081 | N   | LEU | 1600 | 21.912 | -11.999 | 20.724 | 1.00 | 31.11 |
| ATOM | 1083 | CA  | LEU | 1600 | 22.323 | -10.998 | 19.744 | 1.00 | 32.17 |
| ATOM | 1084 | CB  | LEU | 1600 | 23.823 | -10.722 | 19.875 | 1.00 | 32.30 |
| ATOM | 1085 | CG  | LEU | 1600 | 24.275 | -10.162 | 21.235 | 1.00 | 31.08 |
| ATOM | 1086 | CD1 | LEU | 1600 | 25.794 | -9.931  | 21.242 | 1.00 | 30.59 |
| ATOM | 1087 | CD2 | LEU | 1600 | 23.549 | -8.863  | 21.514 | 1.00 | 28.89 |
| ATOM | 1088 | C   | LEU | 1600 | 21.949 | -11.390 | 18.311 | 1.00 | 30.77 |
| ATOM | 1089 | O   | LEU | 1600 | 21.352 | -10.601 | 17.574 | 1.00 | 29.87 |
| ATOM | 1090 | N   | VAL | 1601 | 22.269 | -12.623 | 17.933 | 1.00 | 30.19 |
| ATOM | 1092 | CA  | VAL | 1601 | 21.954 | -13.115 | 16.602 | 1.00 | 29.25 |
| ATOM | 1093 | CB  | VAL | 1601 | 22.593 | -14.497 | 16.349 | 1.00 | 31.27 |
| ATOM | 1094 | CG1 | VAL | 1601 | 22.355 | -14.936 | 14.914 | 1.00 | 31.60 |
| ATOM | 1095 | CG2 | VAL | 1601 | 24.093 | -14.434 | 16.622 | 1.00 | 31.91 |
| ATOM | 1096 | C   | VAL | 1601 | 20.438 | -13.181 | 16.405 | 1.00 | 29.06 |
| ATOM | 1097 | O   | VAL | 1601 | 19.946 | -12.914 | 15.310 | 1.00 | 27.71 |
| ATOM | 1098 | N   | SER | 1602 | 19.702 | -13.511 | 17.468 | 1.00 | 29.10 |
| ATOM | 1100 | CA  | SER | 1602 | 18.243 | -13.585 | 17.400 | 1.00 | 29.29 |
| ATOM | 1101 | CB  | SER | 1602 | 17.680 | -14.189 | 18.679 | 1.00 | 30.81 |
| ATOM | 1102 | OG  | SER | 1602 | 16.266 | -14.074 | 18.692 | 1.00 | 35.78 |
| ATOM | 1104 | C   | SER | 1602 | 17.649 | -12.199 | 17.156 | 1.00 | 28.98 |
| ATOM | 1105 | O   | SER | 1602 | 16.662 | -12.039 | 16.426 | 1.00 | 26.82 |
| ATOM | 1106 | N   | CYS | 1603 | 18.274 | -11.202 | 17.765 | 1.00 | 29.06 |
| ATOM | 1108 | CA  | CYS | 1603 | 17.870 | -9.823  | 17.599 | 1.00 | 29.22 |
| ATOM | 1109 | CB  | CYS | 1603 | 18.784 | -8.943  | 18.438 | 1.00 | 29.66 |
| ATOM | 1110 | SG  | CYS | 1603 | 18.575 | -7.212  | 18.103 | 0.50 | 23.69 |
| ATOM | 1111 | C   | CYS | 1603 | 17.988 | -9.422  | 16.112 | 1.00 | 29.23 |
| ATOM | 1112 | O   | CYS | 1603 | 17.087 | -8.796  | 15.552 | 1.00 | 27.52 |
| ATOM | 1113 | N   | ALA | 1604 | 19.113 | -9.778  | 15.491 | 1.00 | 27.87 |
| ATOM | 1115 | CA  | ALA | 1604 | 19.376 | -9.484  | 14.077 | 1.00 | 26.37 |
| ATOM | 1116 | CB  | ALA | 1604 | 20.783 | -9.941  | 13.690 | 1.00 | 23.88 |
| ATOM | 1117 | C   | ALA | 1604 | 18.349 | -10.203 | 13.223 | 1.00 | 25.82 |

PRT1

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1118 | O   | ALA | 1604 | 17.788 | -9.631  | 12.289 | 1.00 | 25.84 |
| ATOM | 1119 | N   | TYR | 1605 | 18.119 | -11.468 | 13.544 | 1.00 | 25.56 |
| ATOM | 1121 | CA  | TYR | 1605 | 17.152 | -12.276 | 12.827 | 1.00 | 27.81 |
| ATOM | 1122 | CB  | TYR | 1605 | 17.080 | -13.662 | 13.456 | 1.00 | 26.66 |
| ATOM | 1123 | CG  | TYR | 1605 | 15.974 | -14.515 | 12.886 | 1.00 | 30.75 |
| ATOM | 1124 | CD1 | TYR | 1605 | 16.111 | -15.141 | 11.640 | 1.00 | 30.20 |
| ATOM | 1125 | CE1 | TYR | 1605 | 15.088 | -15.944 | 11.126 | 1.00 | 30.03 |
| ATOM | 1126 | CD2 | TYR | 1605 | 14.790 | -14.707 | 13.596 | 1.00 | 30.73 |
| ATOM | 1127 | CE2 | TYR | 1605 | 13.775 | -15.500 | 13.097 | 1.00 | 30.71 |
| ATOM | 1128 | CZ  | TYR | 1605 | 13.930 | -16.117 | 11.867 | 1.00 | 30.93 |
| ATOM | 1129 | OH  | TYR | 1605 | 12.923 | -16.928 | 11.417 | 1.00 | 32.31 |
| ATOM | 1131 | C   | TYR | 1605 | 15.748 | -11.641 | 12.775 | 1.00 | 26.15 |
| ATOM | 1132 | O   | TYR | 1605 | 15.147 | -11.551 | 11.702 | 1.00 | 26.64 |
| ATOM | 1133 | N   | GLN | 1606 | 15.244 | -11.200 | 13.926 | 1.00 | 25.48 |
| ATOM | 1135 | CA  | GLN | 1606 | 13.921 | -10.581 | 14.023 | 1.00 | 26.86 |
| ATOM | 1136 | CB  | GLN | 1606 | 13.589 | -10.269 | 15.482 | 1.00 | 26.83 |
| ATOM | 1137 | CG  | GLN | 1606 | 13.357 | -11.508 | 16.332 | 1.00 | 25.84 |
| ATOM | 1138 | CD  | GLN | 1606 | 13.151 | -11.167 | 17.791 | 1.00 | 30.86 |
| ATOM | 1139 | OE1 | GLN | 1606 | 12.202 | -10.471 | 18.150 | 1.00 | 31.87 |
| ATOM | 1140 | NE2 | GLN | 1606 | 14.056 | -11.631 | 18.640 | 1.00 | 31.67 |
| ATOM | 1143 | C   | GLN | 1606 | 13.835 | -9.310  | 13.186 | 1.00 | 27.52 |
| ATOM | 1144 | O   | GLN | 1606 | 12.831 | -9.058  | 12.506 | 1.00 | 26.05 |
| ATOM | 1145 | N   | VAL | 1607 | 14.904 | -8.523  | 13.216 | 1.00 | 26.68 |
| ATOM | 1147 | CA  | VAL | 1607 | 14.963 | -7.301  | 12.435 | 1.00 | 25.66 |
| ATOM | 1148 | CB  | VAL | 1607 | 16.225 | -6.485  | 12.787 | 1.00 | 28.50 |
| ATOM | 1149 | CG1 | VAL | 1607 | 16.363 | -5.274  | 11.853 | 1.00 | 26.04 |
| ATOM | 1150 | CG2 | VAL | 1607 | 16.151 | -6.031  | 14.246 | 1.00 | 24.45 |
| ATOM | 1151 | C   | VAL | 1607 | 14.934 | -7.641  | 10.938 | 1.00 | 24.89 |
| ATOM | 1152 | O   | VAL | 1607 | 14.184 | -7.033  | 10.177 | 1.00 | 25.86 |
| ATOM | 1153 | N   | ALA | 1608 | 15.738 | -8.619  | 10.522 | 1.00 | 25.24 |
| ATOM | 1155 | CA  | ALA | 1608 | 15.773 | -9.039  | 9.120  | 1.00 | 22.95 |
| ATOM | 1156 | CB  | ALA | 1608 | 16.813 | -10.117 | 8.920  | 1.00 | 20.24 |
| ATOM | 1157 | C   | ALA | 1608 | 14.383 | -9.541  | 8.679  | 1.00 | 25.71 |
| ATOM | 1158 | O   | ALA | 1608 | 13.963 | -9.319  | 7.532  | 1.00 | 27.48 |
| ATOM | 1159 | N   | ARG | 1609 | 13.676 | -10.216 | 9.585  | 1.00 | 27.10 |
| ATOM | 1161 | CA  | ARG | 1609 | 12.327 | -10.708 | 9.301  | 1.00 | 28.55 |
| ATOM | 1162 | CB  | ARG | 1609 | 11.840 | -11.640 | 10.397 | 1.00 | 31.53 |
| ATOM | 1163 | CG  | ARG | 1609 | 12.407 | -13.005 | 10.290 | 1.00 | 36.05 |
| ATOM | 1164 | CD  | ARG | 1609 | 11.537 | -13.931 | 11.056 | 1.00 | 40.28 |
| ATOM | 1165 | NE  | ARG | 1609 | 10.849 | -14.874 | 10.190 | 1.00 | 42.06 |
| ATOM | 1167 | CZ  | ARG | 1609 | 9.974  | -15.771 | 10.632 | 1.00 | 42.08 |
| ATOM | 1168 | NH1 | ARG | 1609 | 9.678  | -15.834 | 11.928 | 1.00 | 40.32 |
| ATOM | 1171 | NH2 | ARG | 1609 | 9.416  | -16.620 | 9.784  | 1.00 | 43.27 |
| ATOM | 1174 | C   | ARG | 1609 | 11.329 | -9.569  | 9.124  | 1.00 | 25.55 |
| ATOM | 1175 | O   | ARG | 1609 | 10.469 | -9.621  | 8.231  | 1.00 | 26.98 |
| ATOM | 1176 | N   | GLY | 1610 | 11.418 | -8.565  | 9.996  | 1.00 | 23.92 |
| ATOM | 1178 | CA  | GLY | 1610 | 10.555 | -7.406  | 9.870  | 1.00 | 22.19 |
| ATOM | 1179 | C   | GLY | 1610 | 10.800 | -6.747  | 8.512  | 1.00 | 25.92 |
| ATOM | 1180 | O   | GLY | 1610 | 9.855  | -6.424  | 7.772  | 1.00 | 23.49 |
| ATOM | 1181 | N   | MET | 1611 | 12.076 | -6.589  | 8.163  | 1.00 | 23.15 |
| ATOM | 1183 | CA  | MET | 1611 | 12.456 | -5.989  | 6.888  | 1.00 | 22.57 |
| ATOM | 1184 | CB  | MET | 1611 | 13.956 | -5.710  | 6.849  | 1.00 | 22.18 |
| ATOM | 1185 | CG  | MET | 1611 | 14.398 | -4.542  | 7.729  | 1.00 | 22.63 |
| ATOM | 1186 | SD  | MET | 1611 | 13.478 | -3.006  | 7.426  | 1.00 | 25.23 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1187 | CE  | MET | 1611 | 13.812 | -2.688  | 5.675  | 1.00 | 21.38 |
| ATOM | 1188 | C   | MET | 1611 | 12.050 | -6.848  | 5.681  | 1.00 | 23.96 |
| ATOM | 1189 | O   | MET | 1611 | 11.673 | -6.326  | 4.633  | 1.00 | 25.26 |
| ATOM | 1190 | N   | GLU | 1612 | 12.130 | -8.163  | 5.822  | 1.00 | 24.34 |
| ATOM | 1192 | CA  | GLU | 1612 | 11.755 | -9.043  | 4.733  | 1.00 | 25.56 |
| ATOM | 1193 | CB  | GLU | 1612 | 12.018 | -10.494 | 5.121  | 1.00 | 24.96 |
| ATOM | 1194 | CG  | GLU | 1612 | 11.703 | -11.488 | 4.009  | 1.00 | 26.79 |
| ATOM | 1195 | CD  | GLU | 1612 | 11.812 | -12.931 | 4.450  | 1.00 | 26.96 |
| ATOM | 1196 | OE1 | GLU | 1612 | 11.557 | -13.212 | 5.636  | 1.00 | 30.98 |
| ATOM | 1197 | OE2 | GLU | 1612 | 12.154 | -13.791 | 3.611  | 1.00 | 32.31 |
| ATOM | 1198 | C   | GLU | 1612 | 10.267 | -8.829  | 4.415  | 1.00 | 25.70 |
| ATOM | 1199 | O   | GLU | 1612 | 9.860  | -8.753  | 3.252  | 1.00 | 24.30 |
| ATOM | 1200 | N   | TYR | 1613 | 9.463  | -8.723  | 5.465  | 1.00 | 23.55 |
| ATOM | 1202 | CA  | TYR | 1613 | 8.037  | -8.501  | 5.294  | 1.00 | 22.94 |
| ATOM | 1203 | CB  | TYR | 1613 | 7.314  | -8.586  | 6.650  | 1.00 | 24.00 |
| ATOM | 1204 | CG  | TYR | 1613 | 5.841  | -8.281  | 6.549  | 1.00 | 22.93 |
| ATOM | 1205 | CD1 | TYR | 1613 | 4.945  | -9.245  | 6.097  | 1.00 | 21.60 |
| ATOM | 1206 | CE1 | TYR | 1613 | 3.582  | -8.962  | 5.963  | 1.00 | 21.14 |
| ATOM | 1207 | CD2 | TYR | 1613 | 5.347  | -7.018  | 6.869  | 1.00 | 25.81 |
| ATOM | 1208 | CE2 | TYR | 1613 | 3.979  | -6.718  | 6.733  | 1.00 | 24.45 |
| ATOM | 1209 | CZ  | TYR | 1613 | 3.112  | -7.697  | 6.281  | 1.00 | 23.28 |
| ATOM | 1210 | OH  | TYR | 1613 | 1.775  | -7.411  | 6.126  | 1.00 | 22.95 |
| ATOM | 1212 | C   | TYR | 1613 | 7.803  | -7.138  | 4.637  | 1.00 | 22.57 |
| ATOM | 1213 | O   | TYR | 1613 | 7.022  | -7.024  | 3.699  | 1.00 | 24.72 |
| ATOM | 1214 | N   | LEU | 1614 | 8.460  | -6.101  | 5.156  | 1.00 | 22.16 |
| ATOM | 1216 | CA  | LEU | 1614 | 8.334  | -4.755  | 4.615  | 1.00 | 22.60 |
| ATOM | 1217 | CB  | LEU | 1614 | 9.175  | -3.772  | 5.440  | 1.00 | 22.56 |
| ATOM | 1218 | CG  | LEU | 1614 | 8.577  | -3.415  | 6.802  | 1.00 | 24.92 |
| ATOM | 1219 | CD1 | LEU | 1614 | 9.535  | -2.541  | 7.580  | 1.00 | 21.46 |
| ATOM | 1220 | CD2 | LEU | 1614 | 7.218  | -2.711  | 6.611  | 1.00 | 21.87 |
| ATOM | 1221 | C   | LEU | 1614 | 8.699  | -4.683  | 3.124  | 1.00 | 23.76 |
| ATOM | 1222 | O   | LEU | 1614 | 7.975  | -4.077  | 2.326  | 1.00 | 23.84 |
| ATOM | 1223 | N   | ALA | 1615 | 9.809  | -5.314  | 2.744  | 1.00 | 23.48 |
| ATOM | 1225 | CA  | ALA | 1615 | 10.232 | -5.340  | 1.352  | 1.00 | 22.70 |
| ATOM | 1226 | CB  | ALA | 1615 | 11.591 | -6.019  | 1.215  | 1.00 | 21.52 |
| ATOM | 1227 | C   | ALA | 1615 | 9.188  | -6.063  | 0.505  | 1.00 | 22.87 |
| ATOM | 1228 | O   | ALA | 1615 | 8.854  | -5.591  | -0.581 | 1.00 | 24.23 |
| ATOM | 1229 | N   | SER | 1616 | 8.652  | -7.176  | 1.015  | 1.00 | 22.76 |
| ATOM | 1231 | CA  | SER | 1616 | 7.638  | -7.954  | 0.295  | 1.00 | 22.88 |
| ATOM | 1232 | CB  | SER | 1616 | 7.315  | -9.251  | 1.039  | 1.00 | 21.39 |
| ATOM | 1233 | OG  | SER | 1616 | 6.400  | -9.036  | 2.102  | 1.00 | 26.24 |
| ATOM | 1235 | C   | SER | 1616 | 6.360  | -7.131  | 0.044  | 1.00 | 24.88 |
| ATOM | 1236 | O   | SER | 1616 | 5.635  | -7.358  | -0.927 | 1.00 | 24.73 |
| ATOM | 1237 | N   | LYS | 1617 | 6.104  | -6.173  | 0.927  | 1.00 | 23.82 |
| ATOM | 1239 | CA  | LYS | 1617 | 4.970  | -5.287  | 0.810  | 1.00 | 22.47 |
| ATOM | 1240 | CB  | LYS | 1617 | 4.455  | -4.914  | 2.199  | 1.00 | 23.62 |
| ATOM | 1241 | CG  | LYS | 1617 | 3.792  | -6.072  | 2.927  | 1.00 | 27.16 |
| ATOM | 1242 | CD  | LYS | 1617 | 2.551  | -6.487  | 2.169  | 1.00 | 30.84 |
| ATOM | 1243 | CE  | LYS | 1617 | 1.810  | -7.602  | 2.852  | 1.00 | 33.57 |
| ATOM | 1244 | NZ  | LYS | 1617 | 2.484  | -8.894  | 2.653  | 1.00 | 44.30 |
| ATOM | 1248 | C   | LYS | 1617 | 5.346  | -4.034  | 0.035  | 1.00 | 23.56 |
| ATOM | 1249 | O   | LYS | 1617 | 4.639  | -3.030  | 0.091  | 1.00 | 25.16 |
| ATOM | 1250 | N   | LYS | 1618 | 6.495  | -4.066  | -0.638 | 1.00 | 24.69 |
| ATOM | 1252 | CA  | LYS | 1618 | 6.953  | -2.943  | -1.468 | 1.00 | 24.04 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1253 | CB  | LYS | 1618 | 5.863  | -2.581 | -2.492 | 1.00 | 26.96 |
| ATOM | 1254 | CG  | LYS | 1618 | 5.775  | -3.491 | -3.709 | 1.00 | 29.14 |
| ATOM | 1255 | CD  | LYS | 1618 | 5.567  | -4.942 | -3.345 | 1.00 | 33.91 |
| ATOM | 1256 | CE  | LYS | 1618 | 5.662  | -5.858 | -4.558 | 1.00 | 32.98 |
| ATOM | 1257 | NZ  | LYS | 1618 | 4.431  | -5.821 | -5.380 | 1.00 | 36.73 |
| ATOM | 1261 | C   | LYS | 1618 | 7.406  | -1.686 | -0.713 | 1.00 | 24.01 |
| ATOM | 1262 | O   | LYS | 1618 | 7.557  | -0.606 | -1.302 | 1.00 | 23.73 |
| ATOM | 1263 | N   | CYS | 1619 | 7.689  | -1.842 | 0.573  | 1.00 | 25.91 |
| ATOM | 1265 | CA  | CYS | 1619 | 8.108  | -0.731 | 1.418  | 1.00 | 25.65 |
| ATOM | 1266 | CB  | CYS | 1619 | 7.444  | -0.885 | 2.792  | 1.00 | 24.93 |
| ATOM | 1267 | SG  | CYS | 1619 | 7.941  | 0.313  | 4.064  | 1.00 | 28.14 |
| ATOM | 1268 | C   | CYS | 1619 | 9.631  | -0.628 | 1.573  | 1.00 | 23.07 |
| ATOM | 1269 | O   | CYS | 1619 | 10.304 | -1.630 | 1.809  | 1.00 | 20.98 |
| ATOM | 1270 | N   | ILE | 1620 | 10.170 | 0.573  | 1.363  | 1.00 | 22.95 |
| ATOM | 1272 | CA  | ILE | 1620 | 11.604 | 0.841  | 1.524  | 1.00 | 23.81 |
| ATOM | 1273 | CB  | ILE | 1620 | 12.202 | 1.607  | 0.276  | 1.00 | 24.36 |
| ATOM | 1274 | CG2 | ILE | 1620 | 13.670 | 1.995  | 0.506  | 1.00 | 17.24 |
| ATOM | 1275 | CG1 | ILE | 1620 | 12.108 | 0.739  | -0.987 | 1.00 | 23.13 |
| ATOM | 1276 | CD1 | ILE | 1620 | 12.171 | 1.544  | -2.286 | 1.00 | 25.37 |
| ATOM | 1277 | C   | ILE | 1620 | 11.633 | 1.729  | 2.771  | 1.00 | 24.70 |
| ATOM | 1278 | O   | ILE | 1620 | 10.981 | 2.763  | 2.806  | 1.00 | 25.21 |
| ATOM | 1279 | N   | HIS | 1621 | 12.348 | 1.297  | 3.804  | 1.00 | 25.62 |
| ATOM | 1281 | CA  | HIS | 1621 | 12.427 | 2.041  | 5.057  | 1.00 | 25.53 |
| ATOM | 1282 | CB  | HIS | 1621 | 13.181 | 1.237  | 6.132  | 1.00 | 22.76 |
| ATOM | 1283 | CG  | HIS | 1621 | 13.004 | 1.773  | 7.528  | 1.00 | 26.42 |
| ATOM | 1284 | CD2 | HIS | 1621 | 12.356 | 1.260  | 8.601  | 1.00 | 24.74 |
| ATOM | 1285 | ND1 | HIS | 1621 | 13.474 | 3.011  | 7.927  | 1.00 | 26.62 |
| ATOM | 1287 | CE1 | HIS | 1621 | 13.119 | 3.233  | 9.179  | 1.00 | 25.70 |
| ATOM | 1288 | NE2 | HIS | 1621 | 12.439 | 2.187  | 9.616  | 1.00 | 26.23 |
| ATOM | 1290 | C   | HIS | 1621 | 13.073 | 3.401  | 4.914  | 1.00 | 26.36 |
| ATOM | 1291 | O   | HIS | 1621 | 12.528 | 4.405  | 5.370  | 1.00 | 25.89 |
| ATOM | 1292 | N   | ARG | 1622 | 14.271 | 3.406  | 4.341  | 1.00 | 25.35 |
| ATOM | 1294 | CA  | ARG | 1622 | 15.082 | 4.608  | 4.140  | 1.00 | 25.05 |
| ATOM | 1295 | CB  | ARG | 1622 | 14.268 | 5.766  | 3.540  | 1.00 | 20.89 |
| ATOM | 1296 | CG  | ARG | 1622 | 13.709 | 5.444  | 2.175  | 1.00 | 19.03 |
| ATOM | 1297 | CD  | ARG | 1622 | 13.089 | 6.656  | 1.488  | 0.50 | 14.06 |
| ATOM | 1298 | NE  | ARG | 1622 | 12.684 | 6.300  | 0.131  | 0.50 | 11.96 |
| ATOM | 1300 | CZ  | ARG | 1622 | 11.606 | 5.577  | -0.166 | 0.50 | 11.83 |
| ATOM | 1301 | NH1 | ARG | 1622 | 10.801 | 5.137  | 0.797  | 0.50 | 10.20 |
| ATOM | 1304 | NH2 | ARG | 1622 | 11.366 | 5.239  | -1.425 | 0.50 | 8.63  |
| ATOM | 1307 | C   | ARG | 1622 | 15.877 | 5.058  | 5.379  | 1.00 | 24.37 |
| ATOM | 1308 | O   | ARG | 1622 | 16.787 | 5.863  | 5.268  | 1.00 | 25.17 |
| ATOM | 1309 | N   | ASP | 1623 | 15.555 | 4.527  | 6.552  | 1.00 | 24.61 |
| ATOM | 1311 | CA  | ASP | 1623 | 16.315 | 4.899  | 7.748  | 1.00 | 28.82 |
| ATOM | 1312 | CB  | ASP | 1623 | 15.777 | 6.173  | 8.410  | 1.00 | 32.33 |
| ATOM | 1313 | CG  | ASP | 1623 | 16.733 | 6.735  | 9.469  | 1.00 | 36.67 |
| ATOM | 1314 | OD1 | ASP | 1623 | 16.276 | 7.520  | 10.321 | 1.00 | 43.56 |
| ATOM | 1315 | OD2 | ASP | 1623 | 17.937 | 6.385  | 9.463  | 1.00 | 36.29 |
| ATOM | 1316 | C   | ASP | 1623 | 16.408 | 3.766  | 8.766  | 1.00 | 28.22 |
| ATOM | 1317 | O   | ASP | 1623 | 16.118 | 3.937  | 9.956  | 1.00 | 26.87 |
| ATOM | 1318 | N   | LEU | 1624 | 16.783 | 2.592  | 8.278  | 1.00 | 26.34 |
| ATOM | 1320 | CA  | LEU | 1624 | 16.941 | 1.428  | 9.132  | 1.00 | 26.59 |
| ATOM | 1321 | CB  | LEU | 1624 | 16.996 | 0.168  | 8.265  | 1.00 | 24.59 |
| ATOM | 1322 | CG  | LEU | 1624 | 17.082 | -1.175 | 8.978  | 1.00 | 24.72 |



|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1323 | CD1 | LEU | 1624 | 15.844 | -1.408 | 9.856  | 1.00 | 24.35 |
| ATOM | 1324 | CD2 | LEU | 1624 | 17.258 | -2.261 | 7.931  | 1.00 | 24.63 |
| ATOM | 1325 | C   | LEU | 1624 | 18.210 | 1.595  | 10.004 | 1.00 | 26.87 |
| ATOM | 1326 | O   | LEU | 1624 | 19.322 | 1.777  | 9.497  | 1.00 | 28.19 |
| ATOM | 1327 | N   | ALA | 1625 | 18.009 | 1.570  | 11.317 | 1.00 | 27.77 |
| ATOM | 1329 | CA  | ALA | 1625 | 19.069 | 1.741  | 12.309 | 1.00 | 24.54 |
| ATOM | 1330 | CB  | ALA | 1625 | 19.355 | 3.210  | 12.494 | 1.00 | 19.81 |
| ATOM | 1331 | C   | ALA | 1625 | 18.498 | 1.173  | 13.592 | 1.00 | 26.44 |
| ATOM | 1332 | O   | ALA | 1625 | 17.289 | 0.961  | 13.679 | 1.00 | 27.58 |
| ATOM | 1333 | N   | ALA | 1626 | 19.342 | 0.940  | 14.594 | 1.00 | 25.38 |
| ATOM | 1335 | CA  | ALA | 1626 | 18.872 | 0.397  | 15.865 | 1.00 | 24.65 |
| ATOM | 1336 | CB  | ALA | 1626 | 20.054 | 0.023  | 16.774 | 1.00 | 23.35 |
| ATOM | 1337 | C   | ALA | 1626 | 17.929 | 1.373  | 16.578 | 1.00 | 25.54 |
| ATOM | 1338 | O   | ALA | 1626 | 17.057 | 0.951  | 17.325 | 1.00 | 27.70 |
| ATOM | 1339 | N   | ARG | 1627 | 18.104 | 2.671  | 16.344 | 1.00 | 25.06 |
| ATOM | 1341 | CA  | ARG | 1627 | 17.242 | 3.675  | 16.959 | 1.00 | 25.48 |
| ATOM | 1342 | CB  | ARG | 1627 | 17.706 | 5.089  | 16.597 | 1.00 | 28.15 |
| ATOM | 1343 | CG  | ARG | 1627 | 17.759 | 5.370  | 15.084 | 1.00 | 33.13 |
| ATOM | 1344 | CD  | ARG | 1627 | 18.157 | 6.811  | 14.774 | 1.00 | 33.29 |
| ATOM | 1345 | NE  | ARG | 1627 | 18.442 | 7.011  | 13.351 | 1.00 | 35.74 |
| ATOM | 1347 | CZ  | ARG | 1627 | 19.652 | 6.889  | 12.813 | 1.00 | 37.40 |
| ATOM | 1348 | NH1 | ARG | 1627 | 20.695 | 6.585  | 13.575 | 1.00 | 39.73 |
| ATOM | 1351 | NH2 | ARG | 1627 | 19.817 | 7.012  | 11.507 | 1.00 | 36.90 |
| ATOM | 1354 | C   | ARG | 1627 | 15.812 | 3.491  | 16.479 | 1.00 | 24.81 |
| ATOM | 1355 | O   | ARG | 1627 | 14.871 | 3.853  | 17.173 | 1.00 | 24.05 |
| ATOM | 1356 | N   | ASN | 1628 | 15.667 | 2.910  | 15.293 | 1.00 | 24.80 |
| ATOM | 1358 | CA  | ASN | 1628 | 14.368 | 2.686  | 14.685 | 1.00 | 25.97 |
| ATOM | 1359 | CB  | ASN | 1628 | 14.383 | 3.132  | 13.225 | 1.00 | 30.08 |
| ATOM | 1360 | CG  | ASN | 1628 | 14.417 | 4.640  | 13.096 | 1.00 | 33.62 |
| ATOM | 1361 | OD1 | ASN | 1628 | 13.775 | 5.347  | 13.864 | 1.00 | 35.11 |
| ATOM | 1362 | ND2 | ASN | 1628 | 15.212 | 5.141  | 12.169 | 1.00 | 36.31 |
| ATOM | 1365 | C   | ASN | 1628 | 13.802 | 1.288  | 14.824 | 1.00 | 26.03 |
| ATOM | 1366 | O   | ASN | 1628 | 12.951 | 0.869  | 14.031 | 1.00 | 26.87 |
| ATOM | 1367 | N   | VAL | 1629 | 14.330 | 0.550  | 15.797 | 1.00 | 26.04 |
| ATOM | 1369 | CA  | VAL | 1629 | 13.854 | -0.783 | 16.128 | 1.00 | 25.09 |
| ATOM | 1370 | CB  | VAL | 1629 | 14.924 | -1.876 | 15.959 | 1.00 | 27.00 |
| ATOM | 1371 | CG1 | VAL | 1629 | 14.390 | -3.197 | 16.546 | 1.00 | 20.99 |
| ATOM | 1372 | CG2 | VAL | 1629 | 15.295 | -2.051 | 14.462 | 1.00 | 23.26 |
| ATOM | 1373 | C   | VAL | 1629 | 13.504 | -0.671 | 17.600 | 1.00 | 27.59 |
| ATOM | 1374 | O   | VAL | 1629 | 14.340 | -0.285 | 18.418 | 1.00 | 25.81 |
| ATOM | 1375 | N   | LEU | 1630 | 12.245 | -0.929 | 17.923 | 1.00 | 28.17 |
| ATOM | 1377 | CA  | LEU | 1630 | 11.768 | -0.845 | 19.296 | 1.00 | 30.20 |
| ATOM | 1378 | CB  | LEU | 1630 | 10.445 | -0.077 | 19.332 | 1.00 | 30.26 |
| ATOM | 1379 | CG  | LEU | 1630 | 10.484 | 1.285  | 18.626 | 1.00 | 29.81 |
| ATOM | 1380 | CD1 | LEU | 1630 | 9.119  | 1.983  | 18.745 | 1.00 | 28.46 |
| ATOM | 1381 | CD2 | LEU | 1630 | 11.576 | 2.141  | 19.233 | 1.00 | 28.37 |
| ATOM | 1382 | C   | LEU | 1630 | 11.639 | -2.242 | 19.904 | 1.00 | 29.32 |
| ATOM | 1383 | O   | LEU | 1630 | 11.414 | -3.219 | 19.189 | 1.00 | 30.84 |
| ATOM | 1384 | N   | VAL | 1631 | 11.800 | -2.342 | 21.221 | 1.00 | 28.90 |
| ATOM | 1386 | CA  | VAL | 1631 | 11.732 | -3.629 | 21.905 | 1.00 | 26.84 |
| ATOM | 1387 | CB  | VAL | 1631 | 13.067 | -3.919 | 22.670 | 1.00 | 28.88 |
| ATOM | 1388 | CG1 | VAL | 1631 | 13.077 | -5.341 | 23.236 | 1.00 | 21.54 |
| ATOM | 1389 | CG2 | VAL | 1631 | 14.259 | -3.699 | 21.744 | 1.00 | 24.30 |
| ATOM | 1390 | C   | VAL | 1631 | 10.561 | -3.645 | 22.881 | 1.00 | 29.02 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1391 | O   | VAL | 1631 | 10.406 | -2.737  | 23.706 | 1.00 | 29.31 |
| ATOM | 1392 | N   | THR | 1632 | 9.733  | -4.674  | 22.764 | 1.00 | 30.84 |
| ATOM | 1394 | CA  | THR | 1632 | 8.562  | -4.830  | 23.616 | 1.00 | 32.24 |
| ATOM | 1395 | CB  | THR | 1632 | 7.488  | -5.685  | 22.912 | 1.00 | 31.45 |
| ATOM | 1396 | OG1 | THR | 1632 | 7.896  | -7.064  | 22.910 | 1.00 | 30.86 |
| ATOM | 1398 | CG2 | THR | 1632 | 7.268  | -5.194  | 21.470 | 1.00 | 28.04 |
| ATOM | 1399 | C   | THR | 1632 | 8.919  | -5.493  | 24.943 | 1.00 | 34.17 |
| ATOM | 1400 | O   | THR | 1632 | 10.017 | -6.019  | 25.105 | 1.00 | 35.02 |
| ATOM | 1401 | N   | GLU | 1633 | 7.959  | -5.524  | 25.866 | 1.00 | 36.16 |
| ATOM | 1403 | CA  | GLU | 1633 | 8.155  | -6.138  | 27.177 | 1.00 | 36.34 |
| ATOM | 1404 | CB  | GLU | 1633 | 6.865  | -6.063  | 27.996 | 1.00 | 37.07 |
| ATOM | 1405 | CG  | GLU | 1633 | 6.957  | -6.649  | 29.414 | 1.00 | 44.57 |
| ATOM | 1406 | CD  | GLU | 1633 | 8.035  | -6.000  | 30.301 | 1.00 | 49.38 |
| ATOM | 1407 | OE1 | GLU | 1633 | 8.124  | -4.753  | 30.352 | 1.00 | 51.03 |
| ATOM | 1408 | OE2 | GLU | 1633 | 8.788  | -6.750  | 30.968 | 1.00 | 51.63 |
| ATOM | 1409 | C   | GLU | 1633 | 8.600  | -7.585  | 27.042 | 1.00 | 36.42 |
| ATOM | 1410 | O   | GLU | 1633 | 9.347  | -8.085  | 27.874 | 1.00 | 38.56 |
| ATOM | 1411 | N   | ASP | 1634 | 8.185  | -8.240  | 25.964 | 1.00 | 37.70 |
| ATOM | 1413 | CA  | ASP | 1634 | 8.550  | -9.637  | 25.737 | 1.00 | 38.53 |
| ATOM | 1414 | CB  | ASP | 1634 | 7.408  | -10.378 | 25.027 | 1.00 | 44.08 |
| ATOM | 1415 | CG  | ASP | 1634 | 6.041  | -10.106 | 25.657 | 1.00 | 51.60 |
| ATOM | 1416 | OD1 | ASP | 1634 | 5.865  | -10.367 | 26.867 | 1.00 | 52.37 |
| ATOM | 1417 | OD2 | ASP | 1634 | 5.137  | -9.631  | 24.933 | 1.00 | 57.23 |
| ATOM | 1418 | C   | ASP | 1634 | 9.826  | -9.776  | 24.905 | 1.00 | 36.56 |
| ATOM | 1419 | O   | ASP | 1634 | 10.127 | -10.865 | 24.430 | 1.00 | 36.74 |
| ATOM | 1420 | N   | ASN | 1635 | 10.569 | -8.683  | 24.739 | 1.00 | 36.56 |
| ATOM | 1422 | CA  | ASN | 1635 | 11.819 | -8.662  | 23.945 | 1.00 | 37.10 |
| ATOM | 1423 | CB  | ASN | 1635 | 12.888 | -9.587  | 24.548 | 1.00 | 36.92 |
| ATOM | 1424 | CG  | ASN | 1635 | 13.226 | -9.226  | 25.978 | 1.00 | 36.54 |
| ATOM | 1425 | OD1 | ASN | 1635 | 13.275 | -8.058  | 26.340 | 1.00 | 38.84 |
| ATOM | 1426 | ND2 | ASN | 1635 | 13.423 | -10.235 | 26.806 | 1.00 | 39.58 |
| ATOM | 1429 | C   | ASN | 1635 | 11.632 | -8.980  | 22.451 | 1.00 | 34.78 |
| ATOM | 1430 | O   | ASN | 1635 | 12.446 | -9.677  | 21.834 | 1.00 | 34.00 |
| ATOM | 1431 | N   | VAL | 1636 | 10.533 | -8.498  | 21.880 | 1.00 | 31.35 |
| ATOM | 1433 | CA  | VAL | 1636 | 10.279 | -8.711  | 20.469 | 1.00 | 29.76 |
| ATOM | 1434 | CB  | VAL | 1636 | 8.778  | -8.946  | 20.181 | 1.00 | 30.60 |
| ATOM | 1435 | CG1 | VAL | 1636 | 8.538  | -9.081  | 18.675 | 1.00 | 30.38 |
| ATOM | 1436 | CG2 | VAL | 1636 | 8.315  | -10.209 | 20.897 | 1.00 | 28.51 |
| ATOM | 1437 | C   | VAL | 1636 | 10.768 | -7.449  | 19.781 | 1.00 | 28.02 |
| ATOM | 1438 | O   | VAL | 1636 | 10.506 | -6.351  | 20.254 | 1.00 | 25.87 |
| ATOM | 1439 | N   | MET | 1637 | 11.575 | -7.624  | 18.738 | 1.00 | 28.15 |
| ATOM | 1441 | CA  | MET | 1637 | 12.119 | -6.508  | 17.980 | 1.00 | 26.01 |
| ATOM | 1442 | CB  | MET | 1637 | 13.366 | -6.953  | 17.204 | 1.00 | 27.82 |
| ATOM | 1443 | CG  | MET | 1637 | 14.479 | -7.554  | 18.051 | 1.00 | 29.73 |
| ATOM | 1444 | SD  | MET | 1637 | 15.124 | -6.410  | 19.288 | 1.00 | 29.96 |
| ATOM | 1445 | CE  | MET | 1637 | 15.120 | -7.459  | 20.689 | 1.00 | 27.19 |
| ATOM | 1446 | C   | MET | 1637 | 11.040 | -6.087  | 16.993 | 1.00 | 24.77 |
| ATOM | 1447 | O   | MET | 1637 | 10.480 | -6.929  | 16.303 | 1.00 | 24.50 |
| ATOM | 1448 | N   | LYS | 1638 | 10.755 | -4.791  | 16.931 | 1.00 | 25.74 |
| ATOM | 1450 | CA  | LYS | 1638 | 9.746  | -4.258  | 16.029 | 1.00 | 23.67 |
| ATOM | 1451 | CB  | LYS | 1638 | 8.486  | -3.888  | 16.799 | 1.00 | 21.78 |
| ATOM | 1452 | CG  | LYS | 1638 | 7.715  | -5.092  | 17.298 | 1.00 | 24.60 |
| ATOM | 1453 | CD  | LYS | 1638 | 6.406  | -4.683  | 18.005 | 1.00 | 23.87 |
| ATOM | 1454 | CE  | LYS | 1638 | 5.486  | -5.897  | 18.256 | 1.00 | 23.06 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1455 | NZ  | LYS | 1638 | 4.871  | -6.398 | 16.976 | 1.00 | 24.60 |
| ATOM | 1459 | C   | LYS | 1638 | 10.260 | -3.042 | 15.293 | 1.00 | 24.37 |
| ATOM | 1460 | O   | LYS | 1638 | 10.658 | -2.055 | 15.901 | 1.00 | 26.58 |
| ATOM | 1461 | N   | ILE | 1639 | 10.271 | -3.119 | 13.971 | 1.00 | 25.69 |
| ATOM | 1463 | CA  | ILE | 1639 | 10.721 | -2.005 | 13.148 | 1.00 | 25.94 |
| ATOM | 1464 | CB  | ILE | 1639 | 10.935 | -2.447 | 11.668 | 1.00 | 26.49 |
| ATOM | 1465 | CG2 | ILE | 1639 | 11.218 | -1.236 | 10.762 | 1.00 | 21.19 |
| ATOM | 1466 | CG1 | ILE | 1639 | 12.103 | -3.433 | 11.604 | 1.00 | 27.58 |
| ATOM | 1467 | CD1 | ILE | 1639 | 12.120 | -4.232 | 10.355 | 1.00 | 32.96 |
| ATOM | 1468 | C   | ILE | 1639 | 9.675  | -0.892 | 13.242 | 1.00 | 27.32 |
| ATOM | 1469 | O   | ILE | 1639 | 8.466  | -1.133 | 13.103 | 1.00 | 25.45 |
| ATOM | 1470 | N   | ALA | 1640 | 10.156 | 0.320  | 13.498 | 1.00 | 27.43 |
| ATOM | 1472 | CA  | ALA | 1640 | 9.321  | 1.499  | 13.632 | 1.00 | 26.96 |
| ATOM | 1473 | CB  | ALA | 1640 | 9.557  | 2.133  | 15.006 | 1.00 | 25.21 |
| ATOM | 1474 | C   | ALA | 1640 | 9.641  | 2.510  | 12.538 | 1.00 | 26.80 |
| ATOM | 1475 | O   | ALA | 1640 | 10.691 | 2.446  | 11.896 | 1.00 | 27.55 |
| ATOM | 1476 | N   | ASP | 1641 | 8.716  | 3.440  | 12.328 | 1.00 | 27.06 |
| ATOM | 1478 | CA  | ASP | 1641 | 8.862  | 4.526  | 11.349 | 1.00 | 30.54 |
| ATOM | 1479 | CB  | ASP | 1641 | 9.993  | 5.484  | 11.753 | 1.00 | 33.12 |
| ATOM | 1480 | CG  | ASP | 1641 | 9.668  | 6.310  | 12.999 | 1.00 | 36.17 |
| ATOM | 1481 | OD1 | ASP | 1641 | 10.477 | 7.203  | 13.334 | 1.00 | 42.24 |
| ATOM | 1482 | OD2 | ASP | 1641 | 8.633  | 6.076  | 13.648 | 1.00 | 33.22 |
| ATOM | 1483 | C   | ASP | 1641 | 9.049  | 4.107  | 9.898  | 1.00 | 29.94 |
| ATOM | 1484 | O   | ASP | 1641 | 9.598  | 4.861  | 9.102  | 1.00 | 30.13 |
| ATOM | 1485 | N   | PHE | 1642 | 8.569  | 2.920  | 9.553  | 1.00 | 30.22 |
| ATOM | 1487 | CA  | PHE | 1642 | 8.680  | 2.426  | 8.191  | 1.00 | 30.91 |
| ATOM | 1488 | CB  | PHE | 1642 | 8.462  | 0.909  | 8.159  | 1.00 | 26.24 |
| ATOM | 1489 | CG  | PHE | 1642 | 7.156  | 0.470  | 8.750  | 1.00 | 27.82 |
| ATOM | 1490 | CD1 | PHE | 1642 | 5.986  | 0.495  | 7.988  | 1.00 | 27.08 |
| ATOM | 1491 | CD2 | PHE | 1642 | 7.089  | 0.026  | 10.066 | 1.00 | 26.70 |
| ATOM | 1492 | CE1 | PHE | 1642 | 4.761  | 0.088  | 8.532  | 1.00 | 25.18 |
| ATOM | 1493 | CE2 | PHE | 1642 | 5.872  | -0.383 | 10.624 | 1.00 | 27.59 |
| ATOM | 1494 | CZ  | PHE | 1642 | 4.705  | -0.354 | 9.855  | 1.00 | 28.05 |
| ATOM | 1495 | C   | PHE | 1642 | 7.729  | 3.139  | 7.219  | 1.00 | 33.35 |
| ATOM | 1496 | O   | PHE | 1642 | 7.983  | 3.165  | 6.018  | 1.00 | 36.19 |
| ATOM | 1497 | N   | GLY | 1643 | 6.661  | 3.746  | 7.736  | 1.00 | 32.76 |
| ATOM | 1499 | CA  | GLY | 1643 | 5.710  | 4.419  | 6.863  | 1.00 | 31.44 |
| ATOM | 1500 | C   | GLY | 1643 | 5.805  | 5.927  | 6.910  | 1.00 | 32.94 |
| ATOM | 1501 | O   | GLY | 1643 | 4.945  | 6.636  | 6.399  | 1.00 | 33.10 |
| ATOM | 1502 | N   | LEU | 1644 | 6.872  | 6.407  | 7.525  | 1.00 | 35.45 |
| ATOM | 1504 | CA  | LEU | 1644 | 7.124  | 7.828  | 7.684  | 1.00 | 39.04 |
| ATOM | 1505 | CB  | LEU | 1644 | 8.387  | 8.011  | 8.514  | 1.00 | 37.80 |
| ATOM | 1506 | CG  | LEU | 1644 | 8.414  | 9.120  | 9.549  | 1.00 | 42.51 |
| ATOM | 1507 | CD1 | LEU | 1644 | 7.301  | 8.887  | 10.563 | 1.00 | 44.08 |
| ATOM | 1508 | CD2 | LEU | 1644 | 9.779  | 9.127  | 10.243 | 1.00 | 44.47 |
| ATOM | 1509 | C   | LEU | 1644 | 7.259  | 8.580  | 6.357  | 1.00 | 42.20 |
| ATOM | 1510 | O   | LEU | 1644 | 7.895  | 8.107  | 5.414  | 1.00 | 44.14 |
| ATOM | 1511 | N   | ALA | 1645 | 6.607  | 9.732  | 6.267  | 1.00 | 43.89 |
| ATOM | 1513 | CA  | ALA | 1645 | 6.677  | 10.569 | 5.082  | 1.00 | 45.62 |
| ATOM | 1514 | CB  | ALA | 1645 | 5.463  | 11.493 | 5.028  | 1.00 | 45.06 |
| ATOM | 1515 | C   | ALA | 1645 | 7.966  | 11.388 | 5.186  | 1.00 | 45.82 |
| ATOM | 1516 | O   | ALA | 1645 | 8.240  | 11.994 | 6.228  | 1.00 | 45.85 |
| ATOM | 1517 | N   | ARG | 1646 | 8.766  | 11.389 | 4.129  | 1.00 | 45.16 |
| ATOM | 1519 | CA  | ARG | 1646 | 10.015 | 12.140 | 4.138  | 1.00 | 47.06 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1520 | CB  | ARG | 1646 | 11.126 | 11.318 | 4.794  | 1.00 | 48.00 |
| ATOM | 1521 | C   | ARG | 1646 | 10.445 | 12.546 | 2.742  | 1.00 | 46.83 |
| ATOM | 1522 | O   | ARG | 1646 | 10.429 | 11.729 | 1.823  | 1.00 | 45.76 |
| ATOM | 1523 | N   | ASP | 1647 | 10.807 | 13.814 | 2.578  | 1.00 | 48.96 |
| ATOM | 1525 | CA  | ASP | 1647 | 11.278 | 14.291 | 1.288  | 1.00 | 50.93 |
| ATOM | 1526 | CB  | ASP | 1647 | 10.938 | 15.769 | 1.073  | 1.00 | 52.33 |
| ATOM | 1527 | CG  | ASP | 1647 | 11.191 | 16.228 | -0.360 | 1.00 | 55.93 |
| ATOM | 1528 | OD1 | ASP | 1647 | 12.231 | 15.850 | -0.956 | 1.00 | 52.58 |
| ATOM | 1529 | OD2 | ASP | 1647 | 10.340 | 16.980 | -0.896 | 1.00 | 59.54 |
| ATOM | 1530 | C   | ASP | 1647 | 12.789 | 14.104 | 1.336  | 1.00 | 50.78 |
| ATOM | 1531 | O   | ASP | 1647 | 13.491 | 14.803 | 2.077  | 1.00 | 48.32 |
| ATOM | 1532 | N   | ILE | 1648 | 13.274 | 13.144 | 0.556  | 1.00 | 50.84 |
| ATOM | 1534 | CA  | ILE | 1648 | 14.696 | 12.833 | 0.516  | 1.00 | 52.58 |
| ATOM | 1535 | CB  | ILE | 1648 | 14.984 | 11.571 | -0.324 | 1.00 | 50.85 |
| ATOM | 1536 | CG2 | ILE | 1648 | 14.204 | 10.386 | 0.241  | 1.00 | 49.34 |
| ATOM | 1537 | CG1 | ILE | 1648 | 14.638 | 11.813 | -1.801 | 1.00 | 48.22 |
| ATOM | 1538 | CD1 | ILE | 1648 | 15.233 | 10.806 | -2.754 | 1.00 | 42.86 |
| ATOM | 1539 | C   | ILE | 1648 | 15.523 | 13.999 | -0.018 | 1.00 | 55.57 |
| ATOM | 1540 | O   | ILE | 1648 | 16.648 | 14.222 | 0.423  | 1.00 | 57.24 |
| ATOM | 1541 | N   | HIS | 1649 | 14.944 | 14.766 | -0.936 | 1.00 | 56.80 |
| ATOM | 1543 | CA  | HIS | 1649 | 15.650 | 15.895 | -1.520 | 1.00 | 58.03 |
| ATOM | 1544 | CB  | HIS | 1649 | 15.013 | 16.302 | -2.859 | 1.00 | 58.71 |
| ATOM | 1545 | CG  | HIS | 1649 | 15.221 | 15.308 | -3.958 | 1.00 | 60.28 |
| ATOM | 1546 | CD2 | HIS | 1649 | 16.303 | 14.566 | -4.306 | 1.00 | 60.74 |
| ATOM | 1547 | ND1 | HIS | 1649 | 14.241 | 14.986 | -4.874 | 1.00 | 61.70 |
| ATOM | 1549 | CE1 | HIS | 1649 | 14.708 | 14.104 | -5.742 | 1.00 | 61.86 |
| ATOM | 1550 | NE2 | HIS | 1649 | 15.959 | 13.833 | -5.417 | 1.00 | 60.98 |
| ATOM | 1552 | C   | HIS | 1649 | 15.721 | 17.093 | -0.591 | 1.00 | 58.49 |
| ATOM | 1553 | O   | HIS | 1649 | 16.129 | 18.175 | -1.004 | 1.00 | 60.56 |
| ATOM | 1554 | N   | HIS | 1650 | 15.285 | 16.916 | 0.654  | 1.00 | 59.58 |
| ATOM | 1556 | CA  | HIS | 1650 | 15.306 | 18.001 | 1.635  | 1.00 | 61.38 |
| ATOM | 1557 | CB  | HIS | 1650 | 13.898 | 18.540 | 1.863  | 1.00 | 65.28 |
| ATOM | 1558 | CG  | HIS | 1650 | 13.404 | 19.433 | 0.738  | 1.00 | 72.62 |
| ATOM | 1559 | CD2 | HIS | 1650 | 13.492 | 20.752 | 0.536  | 1.00 | 76.23 |
| ATOM | 1560 | ND1 | HIS | 1650 | 12.710 | 18.904 | -0.339 | 1.00 | 77.05 |
| ATOM | 1562 | CE1 | HIS | 1650 | 12.402 | 19.907 | -1.157 | 1.00 | 78.51 |
| ATOM | 1563 | NE2 | HIS | 1650 | 12.863 | 21.015 | -0.647 | 1.00 | 78.82 |
| ATOM | 1565 | C   | HIS | 1650 | 15.925 | 17.575 | 2.972  | 1.00 | 60.63 |
| ATOM | 1566 | O   | HIS | 1650 | 15.796 | 18.271 | 3.969  | 1.00 | 60.20 |
| ATOM | 1567 | N   | ILE | 1651 | 16.584 | 16.419 | 2.987  | 1.00 | 60.22 |
| ATOM | 1569 | CA  | ILE | 1651 | 17.197 | 15.920 | 4.204  | 1.00 | 60.03 |
| ATOM | 1570 | CB  | ILE | 1651 | 17.574 | 14.434 | 4.069  | 1.00 | 62.54 |
| ATOM | 1571 | CG2 | ILE | 1651 | 18.280 | 13.920 | 5.323  | 1.00 | 63.48 |
| ATOM | 1572 | CG1 | ILE | 1651 | 16.329 | 13.584 | 3.800  | 1.00 | 65.18 |
| ATOM | 1573 | CD1 | ILE | 1651 | 16.635 | 12.124 | 3.603  | 1.00 | 67.18 |
| ATOM | 1574 | C   | ILE | 1651 | 18.457 | 16.698 | 4.557  | 1.00 | 59.16 |
| ATOM | 1575 | O   | ILE | 1651 | 19.326 | 16.907 | 3.716  | 1.00 | 59.25 |
| ATOM | 1576 | N   | ASP | 1652 | 18.532 | 17.176 | 5.793  | 1.00 | 58.91 |
| ATOM | 1578 | CA  | ASP | 1652 | 19.702 | 17.915 | 6.260  | 1.00 | 58.25 |
| ATOM | 1579 | CB  | ASP | 1652 | 19.312 | 18.788 | 7.444  | 1.00 | 61.14 |
| ATOM | 1580 | CG  | ASP | 1652 | 20.506 | 19.569 | 8.028  | 1.00 | 65.33 |
| ATOM | 1581 | OD1 | ASP | 1652 | 21.614 | 19.574 | 7.411  | 1.00 | 67.11 |
| ATOM | 1582 | OD2 | ASP | 1652 | 20.337 | 20.191 | 9.126  | 1.00 | 69.04 |
| ATOM | 1583 | C   | ASP | 1652 | 20.786 | 16.922 | 6.676  | 1.00 | 56.75 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1584 | O   | ASP | 1652 | 20.699 | 16.307 | 7.741  | 1.00 | 56.06 |
| ATOM | 1585 | N   | TYR | 1653 | 21.794 | 16.762 | 5.826  | 1.00 | 55.40 |
| ATOM | 1587 | CA  | TYR | 1653 | 22.900 | 15.849 | 6.088  | 1.00 | 54.50 |
| ATOM | 1588 | CB  | TYR | 1653 | 23.825 | 15.783 | 4.872  | 1.00 | 52.80 |
| ATOM | 1589 | CG  | TYR | 1653 | 23.334 | 14.854 | 3.796  | 1.00 | 52.10 |
| ATOM | 1590 | CD1 | TYR | 1653 | 24.123 | 14.566 | 2.685  | 1.00 | 51.50 |
| ATOM | 1591 | CE1 | TYR | 1653 | 23.701 | 13.658 | 1.724  | 1.00 | 53.52 |
| ATOM | 1592 | CD2 | TYR | 1653 | 22.099 | 14.214 | 3.917  | 1.00 | 52.88 |
| ATOM | 1593 | CE2 | TYR | 1653 | 21.664 | 13.302 | 2.966  | 1.00 | 54.63 |
| ATOM | 1594 | CZ  | TYR | 1653 | 22.469 | 13.025 | 1.870  | 1.00 | 54.35 |
| ATOM | 1595 | OH  | TYR | 1653 | 22.049 | 12.107 | 0.933  | 1.00 | 53.23 |
| ATOM | 1597 | C   | TYR | 1653 | 23.717 | 16.158 | 7.339  | 1.00 | 55.40 |
| ATOM | 1598 | O   | TYR | 1653 | 24.381 | 15.284 | 7.900  | 1.00 | 54.47 |
| ATOM | 1599 | N   | TYR | 1654 | 23.673 | 17.409 | 7.773  | 1.00 | 56.72 |
| ATOM | 1601 | CA  | TYR | 1654 | 24.421 | 17.826 | 8.947  | 1.00 | 58.87 |
| ATOM | 1602 | CB  | TYR | 1654 | 24.978 | 19.235 | 8.733  | 1.00 | 57.91 |
| ATOM | 1603 | CG  | TYR | 1654 | 26.068 | 19.269 | 7.685  | 1.00 | 60.49 |
| ATOM | 1604 | CD1 | TYR | 1654 | 25.760 | 19.301 | 6.325  | 1.00 | 61.37 |
| ATOM | 1605 | CE1 | TYR | 1654 | 26.769 | 19.289 | 5.356  | 1.00 | 63.72 |
| ATOM | 1606 | CD2 | TYR | 1654 | 27.412 | 19.227 | 8.053  | 1.00 | 61.74 |
| ATOM | 1607 | CE2 | TYR | 1654 | 28.425 | 19.216 | 7.099  | 1.00 | 64.08 |
| ATOM | 1608 | CZ  | TYR | 1654 | 28.102 | 19.248 | 5.753  | 1.00 | 65.12 |
| ATOM | 1609 | OH  | TYR | 1654 | 29.117 | 19.248 | 4.817  | 1.00 | 64.17 |
| ATOM | 1611 | C   | TYR | 1654 | 23.628 | 17.732 | 10.245 | 1.00 | 60.17 |
| ATOM | 1612 | O   | TYR | 1654 | 24.173 | 17.935 | 11.335 | 1.00 | 61.09 |
| ATOM | 1613 | N   | LYS | 1655 | 22.348 | 17.393 | 10.133 | 1.00 | 60.54 |
| ATOM | 1615 | CA  | LYS | 1655 | 21.493 | 17.277 | 11.306 | 1.00 | 62.12 |
| ATOM | 1616 | CB  | LYS | 1655 | 20.019 | 17.382 | 10.910 | 1.00 | 64.32 |
| ATOM | 1617 | CG  | LYS | 1655 | 19.054 | 17.346 | 12.079 | 1.00 | 67.17 |
| ATOM | 1618 | CD  | LYS | 1655 | 17.644 | 17.608 | 11.602 | 1.00 | 73.05 |
| ATOM | 1619 | CE  | LYS | 1655 | 16.626 | 17.243 | 12.660 | 1.00 | 77.36 |
| ATOM | 1620 | NZ  | LYS | 1655 | 15.230 | 17.494 | 12.186 | 1.00 | 81.10 |
| ATOM | 1624 | C   | LYS | 1655 | 21.754 | 15.976 | 12.057 | 1.00 | 62.19 |
| ATOM | 1625 | O   | LYS | 1655 | 21.902 | 14.907 | 11.454 | 1.00 | 61.36 |
| ATOM | 1626 | N   | LYS | 1656 | 21.822 | 16.084 | 13.380 | 1.00 | 62.26 |
| ATOM | 1628 | CA  | LYS | 1656 | 22.069 | 14.933 | 14.236 | 1.00 | 62.28 |
| ATOM | 1629 | CB  | LYS | 1656 | 23.027 | 15.310 | 15.372 | 1.00 | 62.05 |
| ATOM | 1630 | CG  | LYS | 1656 | 24.474 | 15.489 | 14.957 | 1.00 | 62.62 |
| ATOM | 1631 | CD  | LYS | 1656 | 25.320 | 15.889 | 16.157 | 1.00 | 66.45 |
| ATOM | 1632 | CE  | LYS | 1656 | 26.803 | 15.666 | 15.908 | 1.00 | 67.28 |
| ATOM | 1633 | NZ  | LYS | 1656 | 27.619 | 16.007 | 17.109 | 1.00 | 68.45 |
| ATOM | 1637 | C   | LYS | 1656 | 20.774 | 14.381 | 14.824 | 1.00 | 61.86 |
| ATOM | 1638 | O   | LYS | 1656 | 19.714 | 15.007 | 14.733 | 1.00 | 62.95 |
| ATOM | 1639 | N   | THR | 1657 | 20.875 | 13.198 | 15.420 | 1.00 | 60.10 |
| ATOM | 1641 | CA  | THR | 1657 | 19.743 | 12.541 | 16.053 | 1.00 | 57.73 |
| ATOM | 1642 | CB  | THR | 1657 | 19.973 | 11.012 | 16.121 | 1.00 | 56.04 |
| ATOM | 1643 | OG1 | THR | 1657 | 21.150 | 10.730 | 16.896 | 1.00 | 55.21 |
| ATOM | 1645 | CG2 | THR | 1657 | 20.152 | 10.431 | 14.731 | 1.00 | 53.07 |
| ATOM | 1646 | C   | THR | 1657 | 19.664 | 13.102 | 17.472 | 1.00 | 57.74 |
| ATOM | 1647 | O   | THR | 1657 | 20.513 | 13.899 | 17.870 | 1.00 | 57.76 |
| ATOM | 1648 | N   | THR | 1658 | 18.678 | 12.667 | 18.249 | 1.00 | 58.80 |
| ATOM | 1650 | CA  | THR | 1658 | 18.548 | 13.140 | 19.627 | 1.00 | 60.33 |
| ATOM | 1651 | CB  | THR | 1658 | 17.318 | 12.517 | 20.290 | 1.00 | 61.37 |
| ATOM | 1652 | C   | THR | 1658 | 19.811 | 12.779 | 20.406 | 1.00 | 60.43 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1653 | O   | THR | 1658 | 20.350 | 13.599 | 21.155 | 1.00 | 60.59 |
| ATOM | 1654 | N   | ASN | 1659 | 20.311 | 11.567 | 20.161 | 1.00 | 59.97 |
| ATOM | 1656 | CA  | ASN | 1659 | 21.508 | 11.058 | 20.827 | 1.00 | 58.28 |
| ATOM | 1657 | CB  | ASN | 1659 | 21.607 | 9.545  | 20.645 | 1.00 | 59.95 |
| ATOM | 1658 | CG  | ASN | 1659 | 22.444 | 8.883  | 21.723 | 1.00 | 60.10 |
| ATOM | 1659 | OD1 | ASN | 1659 | 22.382 | 9.265  | 22.891 | 1.00 | 61.26 |
| ATOM | 1660 | ND2 | ASN | 1659 | 23.210 | 7.867  | 21.341 | 1.00 | 57.09 |
| ATOM | 1663 | C   | ASN | 1659 | 22.781 | 11.717 | 20.311 | 1.00 | 57.13 |
| ATOM | 1664 | O   | ASN | 1659 | 23.868 | 11.418 | 20.793 | 1.00 | 57.34 |
| ATOM | 1665 | N   | GLY | 1660 | 22.643 | 12.570 | 19.299 | 1.00 | 56.48 |
| ATOM | 1667 | CA  | GLY | 1660 | 23.781 | 13.276 | 18.733 | 1.00 | 54.87 |
| ATOM | 1668 | C   | GLY | 1660 | 24.539 | 12.570 | 17.623 | 1.00 | 53.04 |
| ATOM | 1669 | O   | GLY | 1660 | 25.716 | 12.855 | 17.394 | 1.00 | 54.11 |
| ATOM | 1670 | N   | ARG | 1661 | 23.879 | 11.659 | 16.918 | 1.00 | 51.37 |
| ATOM | 1672 | CA  | ARG | 1661 | 24.536 | 10.930 | 15.833 | 1.00 | 48.96 |
| ATOM | 1673 | CB  | ARG | 1661 | 24.283 | 9.428  | 15.961 | 1.00 | 48.48 |
| ATOM | 1674 | CG  | ARG | 1661 | 24.848 | 8.796  | 17.215 | 1.00 | 50.03 |
| ATOM | 1675 | CD  | ARG | 1661 | 24.492 | 7.325  | 17.234 | 1.00 | 50.78 |
| ATOM | 1676 | NE  | ARG | 1661 | 25.013 | 6.614  | 18.396 | 1.00 | 50.11 |
| ATOM | 1678 | CZ  | ARG | 1661 | 24.902 | 5.299  | 18.566 | 1.00 | 50.08 |
| ATOM | 1679 | NH1 | ARG | 1661 | 24.286 | 4.560  | 17.645 | 1.00 | 46.57 |
| ATOM | 1682 | NH2 | ARG | 1661 | 25.426 | 4.717  | 19.643 | 1.00 | 47.88 |
| ATOM | 1685 | C   | ARG | 1661 | 24.076 | 11.422 | 14.459 | 1.00 | 46.53 |
| ATOM | 1686 | O   | ARG | 1661 | 23.031 | 12.029 | 14.325 | 1.00 | 45.01 |
| ATOM | 1687 | N   | LEU | 1662 | 24.839 | 11.094 | 13.432 | 1.00 | 42.39 |
| ATOM | 1689 | CA  | LEU | 1662 | 24.546 | 11.503 | 12.076 | 1.00 | 40.71 |
| ATOM | 1690 | CB  | LEU | 1662 | 25.823 | 12.031 | 11.399 | 1.00 | 40.25 |
| ATOM | 1691 | CG  | LEU | 1662 | 26.408 | 13.332 | 11.965 | 1.00 | 42.44 |
| ATOM | 1692 | CD1 | LEU | 1662 | 27.853 | 13.478 | 11.537 | 1.00 | 40.42 |
| ATOM | 1693 | CD2 | LEU | 1662 | 25.591 | 14.536 | 11.514 | 1.00 | 41.16 |
| ATOM | 1694 | C   | LEU | 1662 | 23.946 | 10.362 | 11.258 | 1.00 | 38.45 |
| ATOM | 1695 | O   | LEU | 1662 | 24.647 | 9.436  | 10.862 | 1.00 | 36.67 |
| ATOM | 1696 | N   | PRO | 1663 | 22.632 | 10.428 | 10.987 | 1.00 | 37.09 |
| ATOM | 1697 | CD  | PRO | 1663 | 21.717 | 11.475 | 11.489 | 1.00 | 38.18 |
| ATOM | 1698 | CA  | PRO | 1663 | 21.894 | 9.424  | 10.207 | 1.00 | 35.59 |
| ATOM | 1699 | CB  | PRO | 1663 | 20.535 | 10.098 | 9.983  | 1.00 | 35.90 |
| ATOM | 1700 | CG  | PRO | 1663 | 20.343 | 10.856 | 11.258 | 1.00 | 39.13 |
| ATOM | 1701 | C   | PRO | 1663 | 22.556 | 9.045  | 8.876  | 1.00 | 33.05 |
| ATOM | 1702 | O   | PRO | 1663 | 22.362 | 7.933  | 8.378  | 1.00 | 31.16 |
| ATOM | 1703 | N   | VAL | 1664 | 23.333 | 9.960  | 8.299  | 1.00 | 32.07 |
| ATOM | 1705 | CA  | VAL | 1664 | 24.020 | 9.669  | 7.034  | 1.00 | 32.49 |
| ATOM | 1706 | CB  | VAL | 1664 | 24.831 | 10.886 | 6.477  | 1.00 | 32.68 |
| ATOM | 1707 | CG1 | VAL | 1664 | 23.898 | 11.906 | 5.864  | 1.00 | 32.25 |
| ATOM | 1708 | CG2 | VAL | 1664 | 25.670 | 11.523 | 7.571  | 1.00 | 33.22 |
| ATOM | 1709 | C   | VAL | 1664 | 24.957 | 8.469  | 7.171  | 1.00 | 29.57 |
| ATOM | 1710 | O   | VAL | 1664 | 25.328 | 7.864  | 6.175  | 1.00 | 27.39 |
| ATOM | 1711 | N   | LYS | 1665 | 25.303 | 8.116  | 8.409  | 1.00 | 28.82 |
| ATOM | 1713 | CA  | LYS | 1665 | 26.189 | 6.991  | 8.673  | 1.00 | 27.87 |
| ATOM | 1714 | CB  | LYS | 1665 | 26.815 | 7.100  | 10.065 | 1.00 | 26.99 |
| ATOM | 1715 | CG  | LYS | 1665 | 27.967 | 8.089  | 10.079 | 1.00 | 29.23 |
| ATOM | 1716 | CD  | LYS | 1665 | 28.283 | 8.619  | 11.466 | 1.00 | 30.64 |
| ATOM | 1717 | CE  | LYS | 1665 | 29.543 | 9.478  | 11.426 | 1.00 | 30.94 |
| ATOM | 1718 | NZ  | LYS | 1665 | 29.826 | 10.128 | 12.737 | 1.00 | 31.63 |
| ATOM | 1722 | C   | LYS | 1665 | 25.546 | 5.637  | 8.465  | 1.00 | 26.76 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1723 | O   | LYS | 1665 | 26.211 | 4.615  | 8.589  | 1.00 | 26.78 |
| ATOM | 1724 | N   | TRP | 1666 | 24.260 | 5.630  | 8.137  | 1.00 | 25.79 |
| ATOM | 1726 | CA  | TRP | 1666 | 23.561 | 4.381  | 7.865  | 1.00 | 26.56 |
| ATOM | 1727 | CB  | TRP | 1666 | 22.299 | 4.273  | 8.724  | 1.00 | 25.63 |
| ATOM | 1728 | CG  | TRP | 1666 | 22.564 | 3.872  | 10.174 | 1.00 | 26.95 |
| ATOM | 1729 | CD2 | TRP | 1666 | 23.052 | 4.717  | 11.232 | 1.00 | 24.83 |
| ATOM | 1730 | CE2 | TRP | 1666 | 23.134 | 3.920  | 12.398 | 1.00 | 24.49 |
| ATOM | 1731 | CE3 | TRP | 1666 | 23.433 | 6.062  | 11.306 | 1.00 | 24.54 |
| ATOM | 1732 | CD1 | TRP | 1666 | 22.376 | 2.636  | 10.730 | 1.00 | 20.10 |
| ATOM | 1733 | NE1 | TRP | 1666 | 22.716 | 2.660  | 12.063 | 1.00 | 21.86 |
| ATOM | 1735 | CZ2 | TRP | 1666 | 23.575 | 4.433  | 13.627 | 1.00 | 25.71 |
| ATOM | 1736 | CZ3 | TRP | 1666 | 23.870 | 6.569  | 12.523 | 1.00 | 26.00 |
| ATOM | 1737 | CH2 | TRP | 1666 | 23.939 | 5.754  | 13.665 | 1.00 | 26.04 |
| ATOM | 1738 | C   | TRP | 1666 | 23.188 | 4.263  | 6.386  | 1.00 | 23.62 |
| ATOM | 1739 | O   | TRP | 1666 | 22.754 | 3.214  | 5.931  | 1.00 | 24.87 |
| ATOM | 1740 | N   | MET | 1667 | 23.404 | 5.330  | 5.631  | 1.00 | 22.78 |
| ATOM | 1742 | CA  | MET | 1667 | 23.046 | 5.361  | 4.215  | 1.00 | 23.73 |
| ATOM | 1743 | CB  | MET | 1667 | 22.894 | 6.802  | 3.744  | 1.00 | 26.24 |
| ATOM | 1744 | CG  | MET | 1667 | 21.823 | 7.621  | 4.434  | 1.00 | 35.55 |
| ATOM | 1745 | SD  | MET | 1667 | 21.795 | 9.276  | 3.706  | 1.00 | 42.23 |
| ATOM | 1746 | CE  | MET | 1667 | 21.019 | 8.904  | 2.238  | 1.00 | 40.57 |
| ATOM | 1747 | C   | MET | 1667 | 23.991 | 4.693  | 3.239  | 1.00 | 22.77 |
| ATOM | 1748 | O   | MET | 1667 | 25.205 | 4.894  | 3.294  | 1.00 | 24.25 |
| ATOM | 1749 | N   | ALA | 1668 | 23.420 | 3.963  | 2.286  | 1.00 | 22.73 |
| ATOM | 1751 | CA  | ALA | 1668 | 24.217 | 3.337  | 1.237  | 1.00 | 23.54 |
| ATOM | 1752 | CB  | ALA | 1668 | 23.339 | 2.495  | 0.340  | 1.00 | 21.80 |
| ATOM | 1753 | C   | ALA | 1668 | 24.805 | 4.495  | 0.430  | 1.00 | 25.53 |
| ATOM | 1754 | O   | ALA | 1668 | 24.181 | 5.551  | 0.316  | 1.00 | 23.66 |
| ATOM | 1755 | N   | PRO | 1669 | 26.006 | 4.314  | -0.153 | 1.00 | 26.86 |
| ATOM | 1756 | CD  | PRO | 1669 | 26.899 | 3.144  | -0.095 | 1.00 | 26.35 |
| ATOM | 1757 | CA  | PRO | 1669 | 26.611 | 5.390  | -0.942 | 1.00 | 27.78 |
| ATOM | 1758 | CB  | PRO | 1669 | 27.864 | 4.731  | -1.518 | 1.00 | 25.51 |
| ATOM | 1759 | CG  | PRO | 1669 | 28.225 | 3.741  | -0.471 | 1.00 | 25.36 |
| ATOM | 1760 | C   | PRO | 1669 | 25.686 | 5.900  | -2.057 | 1.00 | 26.47 |
| ATOM | 1761 | O   | PRO | 1669 | 25.617 | 7.099  | -2.288 | 1.00 | 28.42 |
| ATOM | 1762 | N   | GLU | 1670 | 24.951 | 5.010  | -2.724 | 1.00 | 26.88 |
| ATOM | 1764 | CA  | GLU | 1670 | 24.057 | 5.459  | -3.796 | 1.00 | 29.03 |
| ATOM | 1765 | CB  | GLU | 1670 | 23.597 | 4.293  | -4.693 | 1.00 | 31.79 |
| ATOM | 1766 | CG  | GLU | 1670 | 22.588 | 3.325  | -4.065 | 1.00 | 32.47 |
| ATOM | 1767 | CD  | GLU | 1670 | 23.212 | 2.184  | -3.255 | 1.00 | 32.43 |
| ATOM | 1768 | OE1 | GLU | 1670 | 22.429 | 1.297  | -2.822 | 1.00 | 25.01 |
| ATOM | 1769 | OE2 | GLU | 1670 | 24.458 | 2.157  | -3.069 | 1.00 | 28.75 |
| ATOM | 1770 | C   | GLU | 1670 | 22.864 | 6.274  | -3.294 | 1.00 | 28.37 |
| ATOM | 1771 | O   | GLU | 1670 | 22.358 | 7.146  | -4.001 | 1.00 | 25.72 |
| ATOM | 1772 | N   | ALA | 1671 | 22.451 | 6.028  | -2.053 | 1.00 | 30.08 |
| ATOM | 1774 | CA  | ALA | 1671 | 21.347 | 6.779  | -1.465 | 1.00 | 31.24 |
| ATOM | 1775 | CB  | ALA | 1671 | 20.751 | 6.031  | -0.287 | 1.00 | 26.42 |
| ATOM | 1776 | C   | ALA | 1671 | 21.899 | 8.125  | -1.013 | 1.00 | 31.36 |
| ATOM | 1777 | O   | ALA | 1671 | 21.298 | 9.167  | -1.249 | 1.00 | 33.11 |
| ATOM | 1778 | N   | LEU | 1672 | 23.068 | 8.096  | -0.387 | 1.00 | 32.73 |
| ATOM | 1780 | CA  | LEU | 1672 | 23.715 | 9.304  | 0.100  | 1.00 | 33.96 |
| ATOM | 1781 | CB  | LEU | 1672 | 24.931 | 8.935  | 0.940  | 1.00 | 33.89 |
| ATOM | 1782 | CG  | LEU | 1672 | 25.783 | 10.071 | 1.502  | 1.00 | 37.62 |
| ATOM | 1783 | CD1 | LEU | 1672 | 25.010 | 10.800 | 2.581  | 1.00 | 39.57 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1784 | CD2 | LEU | 1672 | 27.054 | 9.491  | 2.087  | 1.00 | 32.30 |
| ATOM | 1785 | C   | LEU | 1672 | 24.157 | 10.207 | -1.042 | 1.00 | 36.83 |
| ATOM | 1786 | O   | LEU | 1672 | 23.769 | 11.369 | -1.102 | 1.00 | 37.87 |
| ATOM | 1787 | N   | PHE | 1673 | 24.959 | 9.669  | -1.954 | 1.00 | 35.82 |
| ATOM | 1789 | CA  | PHE | 1673 | 25.466 | 10.449 | -3.071 | 1.00 | 35.82 |
| ATOM | 1790 | CB  | PHE | 1673 | 26.738 | 9.802  | -3.639 | 1.00 | 34.66 |
| ATOM | 1791 | CG  | PHE | 1673 | 27.850 | 9.642  | -2.634 | 1.00 | 33.84 |
| ATOM | 1792 | CD1 | PHE | 1673 | 28.503 | 8.422  | -2.494 | 1.00 | 32.65 |
| ATOM | 1793 | CD2 | PHE | 1673 | 28.242 | 10.709 | -1.827 | 1.00 | 36.98 |
| ATOM | 1794 | CE1 | PHE | 1673 | 29.540 | 8.257  | -1.555 | 1.00 | 37.95 |
| ATOM | 1795 | CE2 | PHE | 1673 | 29.279 | 10.557 | -0.881 | 1.00 | 39.90 |
| ATOM | 1796 | CZ  | PHE | 1673 | 29.927 | 9.325  | -0.748 | 1.00 | 37.09 |
| ATOM | 1797 | C   | PHE | 1673 | 24.483 | 10.692 | -4.210 | 1.00 | 36.34 |
| ATOM | 1798 | O   | PHE | 1673 | 24.430 | 11.788 | -4.754 | 1.00 | 37.18 |
| ATOM | 1799 | N   | ASP | 1674 | 23.705 | 9.677  | -4.568 | 1.00 | 38.22 |
| ATOM | 1801 | CA  | ASP | 1674 | 22.780 | 9.777  | -5.693 | 1.00 | 38.51 |
| ATOM | 1802 | CB  | ASP | 1674 | 23.008 | 8.597  | -6.633 | 1.00 | 40.34 |
| ATOM | 1803 | CG  | ASP | 1674 | 24.439 | 8.511  | -7.122 | 1.00 | 43.87 |
| ATOM | 1804 | OD1 | ASP | 1674 | 25.092 | 9.571  | -7.254 | 1.00 | 42.79 |
| ATOM | 1805 | OD2 | ASP | 1674 | 24.906 | 7.376  | -7.369 | 1.00 | 47.94 |
| ATOM | 1806 | C   | ASP | 1674 | 21.298 | 9.853  | -5.360 | 1.00 | 40.21 |
| ATOM | 1807 | O   | ASP | 1674 | 20.457 | 9.872  | -6.271 | 1.00 | 39.07 |
| ATOM | 1808 | N   | ARG | 1675 | 20.975 | 9.836  | -4.072 | 1.00 | 39.83 |
| ATOM | 1810 | CA  | ARG | 1675 | 19.589 | 9.900  | -3.631 | 1.00 | 42.25 |
| ATOM | 1811 | CB  | ARG | 1675 | 18.992 | 11.271 | -3.964 | 1.00 | 48.19 |
| ATOM | 1812 | CG  | ARG | 1675 | 19.691 | 12.420 | -3.267 | 1.00 | 59.20 |
| ATOM | 1813 | CD  | ARG | 1675 | 19.462 | 13.729 | -4.019 | 1.00 | 67.81 |
| ATOM | 1814 | NE  | ARG | 1675 | 20.079 | 14.876 | -3.352 | 1.00 | 75.11 |
| ATOM | 1816 | CZ  | ARG | 1675 | 19.688 | 16.136 | -3.525 | 1.00 | 78.74 |
| ATOM | 1817 | NH1 | ARG | 1675 | 18.680 | 16.429 | -4.341 | 1.00 | 79.91 |
| ATOM | 1820 | NH2 | ARG | 1675 | 20.311 | 17.115 | -2.890 | 1.00 | 81.24 |
| ATOM | 1823 | C   | ARG | 1675 | 18.730 | 8.777  | -4.221 | 1.00 | 39.00 |
| ATOM | 1824 | O   | ARG | 1675 | 17.544 | 8.956  | -4.488 | 1.00 | 39.71 |
| ATOM | 1825 | N   | ILE | 1676 | 19.345 | 7.624  | -4.434 | 1.00 | 35.50 |
| ATOM | 1827 | CA  | ILE | 1676 | 18.636 | 6.471  | -4.958 | 1.00 | 33.51 |
| ATOM | 1828 | CB  | ILE | 1676 | 19.434 | 5.759  | -6.039 | 1.00 | 34.59 |
| ATOM | 1829 | CG2 | ILE | 1676 | 18.582 | 4.678  | -6.649 | 1.00 | 33.90 |
| ATOM | 1830 | CG1 | ILE | 1676 | 19.848 | 6.752  | -7.120 | 1.00 | 37.60 |
| ATOM | 1831 | CD1 | ILE | 1676 | 20.861 | 6.197  | -8.109 | 1.00 | 42.67 |
| ATOM | 1832 | C   | ILE | 1676 | 18.390 | 5.501  | -3.809 | 1.00 | 30.94 |
| ATOM | 1833 | O   | ILE | 1676 | 19.326 | 4.926  | -3.252 | 1.00 | 28.62 |
| ATOM | 1834 | N   | TYR | 1677 | 17.124 | 5.351  | -3.443 | 1.00 | 30.60 |
| ATOM | 1836 | CA  | TYR | 1677 | 16.724 | 4.467  | -2.359 | 1.00 | 25.87 |
| ATOM | 1837 | CB  | TYR | 1677 | 15.781 | 5.197  | -1.413 | 1.00 | 26.40 |
| ATOM | 1838 | CG  | TYR | 1677 | 16.483 | 6.220  | -0.555 | 1.00 | 27.67 |
| ATOM | 1839 | CD1 | TYR | 1677 | 16.663 | 7.533  | -0.999 | 1.00 | 27.45 |
| ATOM | 1840 | CE1 | TYR | 1677 | 17.269 | 8.483  | -0.191 | 1.00 | 26.55 |
| ATOM | 1841 | CD2 | TYR | 1677 | 16.935 | 5.883  | 0.721  | 1.00 | 24.58 |
| ATOM | 1842 | CE2 | TYR | 1677 | 17.536 | 6.828  | 1.538  | 1.00 | 26.35 |
| ATOM | 1843 | CZ  | TYR | 1677 | 17.698 | 8.122  | 1.080  | 1.00 | 28.80 |
| ATOM | 1844 | OH  | TYR | 1677 | 18.270 | 9.059  | 1.914  | 1.00 | 34.97 |
| ATOM | 1846 | C   | TYR | 1677 | 16.055 | 3.235  | -2.911 | 1.00 | 22.70 |
| ATOM | 1847 | O   | TYR | 1677 | 15.144 | 3.335  | -3.728 | 1.00 | 26.22 |
| ATOM | 1848 | N   | THR | 1678 | 16.477 | 2.076  | -2.420 | 1.00 | 21.83 |



|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1850 | CA  | THR | 1678 | 15.968 | 0.791  | -2.865 | 1.00 | 22.14 |
| ATOM | 1851 | CB  | THR | 1678 | 16.907 | 0.191  | -3.928 | 1.00 | 23.91 |
| ATOM | 1852 | OG1 | THR | 1678 | 18.229 | 0.105  | -3.373 | 1.00 | 27.47 |
| ATOM | 1854 | CG2 | THR | 1678 | 16.949 | 1.053  | -5.188 | 1.00 | 24.94 |
| ATOM | 1855 | C   | THR | 1678 | 15.999 | -0.176 | -1.692 | 1.00 | 22.79 |
| ATOM | 1856 | O   | THR | 1678 | 16.427 | 0.170  | -0.592 | 1.00 | 23.39 |
| ATOM | 1857 | N   | HIS | 1679 | 15.563 | -1.402 | -1.929 | 1.00 | 21.98 |
| ATOM | 1859 | CA  | HIS | 1679 | 15.613 | -2.417 | -0.888 | 1.00 | 22.97 |
| ATOM | 1860 | CB  | HIS | 1679 | 14.872 | -3.671 | -1.351 | 1.00 | 22.04 |
| ATOM | 1861 | CG  | HIS | 1679 | 13.421 | -3.444 | -1.621 | 1.00 | 25.41 |
| ATOM | 1862 | CD2 | HIS | 1679 | 12.674 | -3.611 | -2.740 | 1.00 | 26.60 |
| ATOM | 1863 | ND1 | HIS | 1679 | 12.556 | -2.954 | -0.663 | 1.00 | 26.13 |
| ATOM | 1865 | CE1 | HIS | 1679 | 11.348 | -2.830 | -1.178 | 1.00 | 28.66 |
| ATOM | 1866 | NE2 | HIS | 1679 | 11.394 | -3.221 | -2.441 | 1.00 | 29.66 |
| ATOM | 1868 | C   | HIS | 1679 | 17.097 | -2.719 | -0.650 | 1.00 | 23.14 |
| ATOM | 1869 | O   | HIS | 1679 | 17.511 | -3.074 | 0.459  | 1.00 | 21.69 |
| ATOM | 1870 | N   | GLN | 1680 | 17.895 | -2.506 | -1.697 | 1.00 | 22.38 |
| ATOM | 1872 | CA  | GLN | 1680 | 19.335 | -2.726 | -1.658 | 1.00 | 22.33 |
| ATOM | 1873 | CB  | GLN | 1680 | 19.948 | -2.594 | -3.058 | 1.00 | 22.52 |
| ATOM | 1874 | CG  | GLN | 1680 | 19.895 | -3.872 | -3.879 | 1.00 | 29.15 |
| ATOM | 1875 | CD  | GLN | 1680 | 18.865 | -3.847 | -4.991 | 1.00 | 33.60 |
| ATOM | 1876 | OE1 | GLN | 1680 | 17.819 | -3.212 | -4.871 | 1.00 | 38.43 |
| ATOM | 1877 | NE2 | GLN | 1680 | 19.159 | -4.542 | -6.085 | 1.00 | 33.44 |
| ATOM | 1880 | C   | GLN | 1680 | 20.007 | -1.740 | -0.732 | 1.00 | 22.61 |
| ATOM | 1881 | O   | GLN | 1680 | 20.943 | -2.093 | -0.027 | 1.00 | 22.00 |
| ATOM | 1882 | N   | SER | 1681 | 19.562 | -0.490 | -0.745 | 1.00 | 22.06 |
| ATOM | 1884 | CA  | SER | 1681 | 20.184 | 0.479  | 0.137  | 1.00 | 23.41 |
| ATOM | 1885 | CB  | SER | 1681 | 19.886 | 1.923  | -0.306 | 1.00 | 20.06 |
| ATOM | 1886 | OG  | SER | 1681 | 18.503 | 2.166  | -0.479 | 1.00 | 22.90 |
| ATOM | 1888 | C   | SER | 1681 | 19.778 | 0.206  | 1.583  | 1.00 | 23.08 |
| ATOM | 1889 | O   | SER | 1681 | 20.528 | 0.531  | 2.506  | 1.00 | 24.13 |
| ATOM | 1890 | N   | ASP | 1682 | 18.608 | -0.412 | 1.770  | 1.00 | 23.19 |
| ATOM | 1892 | CA  | ASP | 1682 | 18.107 | -0.775 | 3.104  | 1.00 | 22.37 |
| ATOM | 1893 | CB  | ASP | 1682 | 16.660 | -1.275 | 3.018  | 1.00 | 24.55 |
| ATOM | 1894 | CG  | ASP | 1682 | 15.616 | -0.172 | 3.222  | 1.00 | 24.22 |
| ATOM | 1895 | OD1 | ASP | 1682 | 14.428 | -0.479 | 3.005  | 1.00 | 25.02 |
| ATOM | 1896 | OD2 | ASP | 1682 | 15.949 | 0.968  | 3.625  | 1.00 | 24.82 |
| ATOM | 1897 | C   | ASP | 1682 | 18.980 | -1.888 | 3.690  | 1.00 | 20.47 |
| ATOM | 1898 | O   | ASP | 1682 | 19.172 | -1.984 | 4.906  | 1.00 | 21.83 |
| ATOM | 1899 | N   | VAL | 1683 | 19.480 | -2.746 | 2.806  | 1.00 | 20.14 |
| ATOM | 1901 | CA  | VAL | 1683 | 20.340 | -3.856 | 3.179  | 1.00 | 20.49 |
| ATOM | 1902 | CB  | VAL | 1683 | 20.493 | -4.842 | 2.003  | 1.00 | 22.38 |
| ATOM | 1903 | CG1 | VAL | 1683 | 21.757 | -5.691 | 2.159  | 1.00 | 19.57 |
| ATOM | 1904 | CG2 | VAL | 1683 | 19.264 | -5.740 | 1.942  | 1.00 | 22.35 |
| ATOM | 1905 | C   | VAL | 1683 | 21.677 | -3.315 | 3.683  | 1.00 | 20.22 |
| ATOM | 1906 | O   | VAL | 1683 | 22.202 | -3.789 | 4.684  | 1.00 | 21.41 |
| ATOM | 1907 | N   | TRP | 1684 | 22.210 | -2.311 | 3.003  | 1.00 | 21.33 |
| ATOM | 1909 | CA  | TRP | 1684 | 23.440 | -1.666 | 3.449  | 1.00 | 22.21 |
| ATOM | 1910 | CB  | TRP | 1684 | 23.768 | -0.473 | 2.540  | 1.00 | 18.78 |
| ATOM | 1911 | CG  | TRP | 1684 | 24.924 | 0.391  | 3.037  | 1.00 | 22.80 |
| ATOM | 1912 | CD2 | TRP | 1684 | 26.237 | 0.477  | 2.472  | 1.00 | 24.60 |
| ATOM | 1913 | CE2 | TRP | 1684 | 26.989 | 1.364  | 3.286  | 1.00 | 24.34 |
| ATOM | 1914 | CE3 | TRP | 1684 | 26.853 | -0.099 | 1.352  | 1.00 | 24.32 |
| ATOM | 1915 | CD1 | TRP | 1684 | 24.933 | 1.208  | 4.138  | 1.00 | 22.28 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1916 | NE1 | TRP | 1684 | 26.169 | 1.791  | 4.297  | 1.00 | 22.32 |
| ATOM | 1918 | CZ2 | TRP | 1684 | 28.324 | 1.669  | 3.022  | 1.00 | 24.77 |
| ATOM | 1919 | CZ3 | TRP | 1684 | 28.193 | 0.213  | 1.090  | 1.00 | 24.46 |
| ATOM | 1920 | CH2 | TRP | 1684 | 28.906 | 1.088  | 1.918  | 1.00 | 24.00 |
| ATOM | 1921 | C   | TRP | 1684 | 23.198 | -1.183 | 4.899  | 1.00 | 23.26 |
| ATOM | 1922 | O   | TRP | 1684 | 23.982 | -1.475 | 5.805  | 1.00 | 24.52 |
| ATOM | 1923 | N   | SER | 1685 | 22.108 | -0.447 | 5.113  | 1.00 | 22.88 |
| ATOM | 1925 | CA  | SER | 1685 | 21.744 | 0.057  | 6.444  | 1.00 | 24.01 |
| ATOM | 1926 | CB  | SER | 1685 | 20.398 | 0.783  | 6.385  | 1.00 | 21.90 |
| ATOM | 1927 | OG  | SER | 1685 | 20.424 | 1.787  | 5.388  | 1.00 | 24.75 |
| ATOM | 1929 | C   | SER | 1685 | 21.659 | -1.087 | 7.464  | 1.00 | 24.28 |
| ATOM | 1930 | O   | SER | 1685 | 22.077 | -0.933 | 8.625  | 1.00 | 23.94 |
| ATOM | 1931 | N   | PHE | 1686 | 21.099 | -2.221 | 7.037  | 1.00 | 23.20 |
| ATOM | 1933 | CA  | PHE | 1686 | 20.993 | -3.393 | 7.898  | 1.00 | 23.87 |
| ATOM | 1934 | CB  | PHE | 1686 | 20.216 | -4.519 | 7.216  | 1.00 | 19.56 |
| ATOM | 1935 | CG  | PHE | 1686 | 20.062 | -5.734 | 8.075  | 1.00 | 22.19 |
| ATOM | 1936 | CD1 | PHE | 1686 | 19.240 | -5.701 | 9.203  | 1.00 | 21.55 |
| ATOM | 1937 | CD2 | PHE | 1686 | 20.773 | -6.899 | 7.793  | 1.00 | 21.94 |
| ATOM | 1938 | CE1 | PHE | 1686 | 19.125 | -6.801 | 10.033 | 1.00 | 21.66 |
| ATOM | 1939 | CE2 | PHE | 1686 | 20.663 | -8.012 | 8.623  | 1.00 | 22.47 |
| ATOM | 1940 | CZ  | PHE | 1686 | 19.842 | -7.961 | 9.743  | 1.00 | 23.14 |
| ATOM | 1941 | C   | PHE | 1686 | 22.389 | -3.890 | 8.300  | 1.00 | 22.62 |
| ATOM | 1942 | O   | PHE | 1686 | 22.579 | -4.424 | 9.407  | 1.00 | 23.09 |
| ATOM | 1943 | N   | GLY | 1687 | 23.354 | -3.726 | 7.401  | 1.00 | 23.50 |
| ATOM | 1945 | CA  | GLY | 1687 | 24.718 | -4.110 | 7.721  | 1.00 | 23.83 |
| ATOM | 1946 | C   | GLY | 1687 | 25.230 | -3.247 | 8.867  | 1.00 | 21.95 |
| ATOM | 1947 | O   | GLY | 1687 | 25.901 | -3.749 | 9.778  | 1.00 | 23.76 |
| ATOM | 1948 | N   | VAL | 1688 | 24.928 | -1.947 | 8.817  | 1.00 | 20.60 |
| ATOM | 1950 | CA  | VAL | 1688 | 25.331 | -1.009 | 9.877  | 1.00 | 22.34 |
| ATOM | 1951 | CB  | VAL | 1688 | 25.020 | 0.481  | 9.488  | 1.00 | 20.94 |
| ATOM | 1952 | CG1 | VAL | 1688 | 25.547 | 1.438  | 10.543 | 1.00 | 21.65 |
| ATOM | 1953 | CG2 | VAL | 1688 | 25.675 | 0.832  | 8.160  | 1.00 | 22.71 |
| ATOM | 1954 | C   | VAL | 1688 | 24.598 | -1.400 | 11.182 | 1.00 | 22.71 |
| ATOM | 1955 | O   | VAL | 1688 | 25.199 | -1.479 | 12.255 | 1.00 | 22.78 |
| ATOM | 1956 | N   | LEU | 1689 | 23.310 | -1.706 | 11.082 | 1.00 | 22.81 |
| ATOM | 1958 | CA  | LEU | 1689 | 22.534 | -2.111 | 12.253 | 1.00 | 25.21 |
| ATOM | 1959 | CB  | LEU | 1689 | 21.064 | -2.357 | 11.866 | 1.00 | 25.78 |
| ATOM | 1960 | CG  | LEU | 1689 | 20.006 | -2.491 | 12.976 | 1.00 | 29.18 |
| ATOM | 1961 | CD1 | LEU | 1689 | 18.643 | -2.109 | 12.408 | 1.00 | 28.57 |
| ATOM | 1962 | CD2 | LEU | 1689 | 19.959 | -3.895 | 13.553 | 1.00 | 26.77 |
| ATOM | 1963 | C   | LEU | 1689 | 23.158 | -3.375 | 12.871 | 1.00 | 25.88 |
| ATOM | 1964 | O   | LEU | 1689 | 23.249 | -3.483 | 14.099 | 1.00 | 26.50 |
| ATOM | 1965 | N   | LEU | 1690 | 23.588 | -4.323 | 12.031 | 1.00 | 25.84 |
| ATOM | 1967 | CA  | LEU | 1690 | 24.221 | -5.544 | 12.523 | 1.00 | 24.43 |
| ATOM | 1968 | CB  | LEU | 1690 | 24.669 | -6.444 | 11.377 | 1.00 | 26.35 |
| ATOM | 1969 | CG  | LEU | 1690 | 23.672 | -7.309 | 10.604 | 1.00 | 26.57 |
| ATOM | 1970 | CD1 | LEU | 1690 | 24.415 | -7.962 | 9.446  | 1.00 | 26.33 |
| ATOM | 1971 | CD2 | LEU | 1690 | 23.042 | -8.380 | 11.502 | 1.00 | 24.66 |
| ATOM | 1972 | C   | LEU | 1690 | 25.430 | -5.168 | 13.349 | 1.00 | 25.22 |
| ATOM | 1973 | O   | LEU | 1690 | 25.646 | -5.706 | 14.435 | 1.00 | 24.84 |
| ATOM | 1974 | N   | TRP | 1691 | 26.211 | -4.227 | 12.826 | 1.00 | 26.92 |
| ATOM | 1976 | CA  | TRP | 1691 | 27.405 | -3.728 | 13.504 | 1.00 | 25.77 |
| ATOM | 1977 | CB  | TRP | 1691 | 28.072 | -2.659 | 12.631 | 1.00 | 24.82 |
| ATOM | 1978 | CG  | TRP | 1691 | 29.394 | -2.195 | 13.154 | 1.00 | 27.98 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1979 | CD2 | TRP | 1691 | 29.623 | -1.104  | 14.056 | 1.00 | 26.95 |
| ATOM | 1980 | CE2 | TRP | 1691 | 31.022 | -1.015  | 14.259 | 1.00 | 27.64 |
| ATOM | 1981 | CE3 | TRP | 1691 | 28.783 | -0.191  | 14.708 | 1.00 | 26.28 |
| ATOM | 1982 | CD1 | TRP | 1691 | 30.634 | -2.715  | 12.856 | 1.00 | 28.38 |
| ATOM | 1983 | NE1 | TRP | 1691 | 31.609 | -2.009  | 13.518 | 1.00 | 29.56 |
| ATOM | 1985 | CZ2 | TRP | 1691 | 31.599 | -0.045  | 15.086 | 1.00 | 27.78 |
| ATOM | 1986 | CZ3 | TRP | 1691 | 29.356 | 0.769   | 15.533 | 1.00 | 27.63 |
| ATOM | 1987 | CH2 | TRP | 1691 | 30.753 | 0.835   | 15.713 | 1.00 | 30.68 |
| ATOM | 1988 | C   | TRP | 1691 | 27.025 | -3.147  | 14.876 | 1.00 | 26.38 |
| ATOM | 1989 | O   | TRP | 1691 | 27.686 | -3.414  | 15.883 | 1.00 | 24.82 |
| ATOM | 1990 | N   | GLU | 1692 | 25.926 | -2.393  | 14.916 | 1.00 | 27.62 |
| ATOM | 1992 | CA  | GLU | 1692 | 25.442 | -1.790  | 16.162 | 1.00 | 27.02 |
| ATOM | 1993 | CB  | GLU | 1692 | 24.193 | -0.963  | 15.919 | 1.00 | 29.27 |
| ATOM | 1994 | CG  | GLU | 1692 | 24.345 | 0.236   | 15.028 | 1.00 | 24.77 |
| ATOM | 1995 | CD  | GLU | 1692 | 23.046 | 0.992   | 14.962 | 1.00 | 25.98 |
| ATOM | 1996 | OE1 | GLU | 1692 | 22.238 | 0.694   | 14.058 | 1.00 | 22.29 |
| ATOM | 1997 | OE2 | GLU | 1692 | 22.803 | 1.837   | 15.850 | 1.00 | 25.12 |
| ATOM | 1998 | C   | GLU | 1692 | 25.092 | -2.856  | 17.191 | 1.00 | 27.88 |
| ATOM | 1999 | O   | GLU | 1692 | 25.333 | -2.673  | 18.379 | 1.00 | 30.18 |
| ATOM | 2000 | N   | ILE | 1693 | 24.500 | -3.956  | 16.734 | 1.00 | 26.65 |
| ATOM | 2002 | CA  | ILE | 1693 | 24.118 | -5.054  | 17.618 | 1.00 | 26.14 |
| ATOM | 2003 | CB  | ILE | 1693 | 23.279 | -6.144  | 16.858 | 1.00 | 25.37 |
| ATOM | 2004 | CG2 | ILE | 1693 | 23.144 | -7.445  | 17.704 | 1.00 | 21.48 |
| ATOM | 2005 | CG1 | ILE | 1693 | 21.897 | -5.563  | 16.496 | 1.00 | 24.80 |
| ATOM | 2006 | CD1 | ILE | 1693 | 21.017 | -6.479  | 15.642 | 1.00 | 22.40 |
| ATOM | 2007 | C   | ILE | 1693 | 25.345 | -5.698  | 18.239 | 1.00 | 27.17 |
| ATOM | 2008 | C   | ILE | 1693 | 25.424 | -5.864  | 19.452 | 1.00 | 27.30 |
| ATOM | 2009 | N   | PHE | 1694 | 26.329 | -6.017  | 17.414 | 1.00 | 29.98 |
| ATOM | 2011 | CA  | PHE | 1694 | 27.518 | -6.674  | 17.925 | 1.00 | 30.61 |
| ATOM | 2012 | CB  | PHE | 1694 | 28.140 | -7.556  | 16.843 | 1.00 | 28.30 |
| ATOM | 2013 | CG  | PHE | 1694 | 27.197 | -8.611  | 16.353 | 1.00 | 30.91 |
| ATOM | 2014 | CD1 | PHE | 1694 | 26.627 | -8.526  | 15.088 | 1.00 | 34.46 |
| ATOM | 2015 | CD2 | PHE | 1694 | 26.743 | -9.601  | 17.224 | 1.00 | 32.71 |
| ATOM | 2016 | CE1 | PHE | 1694 | 25.622 | -9.409  | 14.701 | 1.00 | 34.24 |
| ATOM | 2017 | CE2 | PHE | 1694 | 25.737 | -10.490 | 16.844 | 1.00 | 32.44 |
| ATOM | 2018 | CZ  | PHE | 1694 | 25.170 | -10.387 | 15.592 | 1.00 | 32.70 |
| ATOM | 2019 | C   | PHE | 1694 | 28.512 | -5.796  | 18.689 | 1.00 | 31.74 |
| ATOM | 2020 | O   | PHE | 1694 | 29.469 | -6.299  | 19.276 | 1.00 | 35.15 |
| ATOM | 2021 | N   | THR | 1695 | 28.275 | -4.489  | 18.698 | 1.00 | 31.12 |
| ATOM | 2023 | CA  | THR | 1695 | 29.101 | -3.575  | 19.473 | 1.00 | 29.96 |
| ATOM | 2024 | CB  | THR | 1695 | 29.532 | -2.351  | 18.657 | 1.00 | 28.09 |
| ATOM | 2025 | OG1 | THR | 1695 | 28.373 | -1.685  | 18.150 | 1.00 | 30.65 |
| ATOM | 2027 | CG2 | THR | 1695 | 30.450 | -2.767  | 17.510 | 1.00 | 23.37 |
| ATOM | 2028 | C   | THR | 1695 | 28.240 | -3.128  | 20.664 | 1.00 | 30.01 |
| ATOM | 2029 | O   | THR | 1695 | 28.617 | -2.233  | 21.427 | 1.00 | 31.14 |
| ATOM | 2030 | N   | LEU | 1696 | 27.078 | -3.766  | 20.797 | 1.00 | 27.96 |
| ATOM | 2032 | CA  | LEU | 1696 | 26.113 | -3.490  | 21.862 | 1.00 | 30.25 |
| ATOM | 2033 | CB  | LEU | 1696 | 26.633 | -3.985  | 23.216 | 1.00 | 33.54 |
| ATOM | 2034 | CG  | LEU | 1696 | 26.899 | -5.482  | 23.339 | 1.00 | 32.61 |
| ATOM | 2035 | CD1 | LEU | 1696 | 27.473 | -5.777  | 24.711 | 1.00 | 33.54 |
| ATOM | 2036 | CD2 | LEU | 1696 | 25.602 | -6.233  | 23.126 | 1.00 | 36.37 |
| ATOM | 2037 | C   | LEU | 1696 | 25.717 | -2.031  | 21.958 | 1.00 | 28.19 |
| ATOM | 2038 | O   | LEU | 1696 | 25.792 | -1.431  | 23.018 | 1.00 | 29.18 |
| ATOM | 2039 | N   | GLY | 1697 | 25.251 | -1.472  | 20.853 | 1.00 | 28.24 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 2041 | CA  | GLY | 1697 | 24.851 | -0.082 | 20.858 | 1.00 | 28.29 |
| ATOM | 2042 | C   | GLY | 1697 | 25.990 | 0.845  | 20.499 | 1.00 | 27.68 |
| ATOM | 2043 | O   | GLY | 1697 | 25.960 | 2.022  | 20.846 | 1.00 | 29.79 |
| ATOM | 2044 | N   | GLY | 1698 | 26.986 | 0.324  | 19.790 | 1.00 | 29.23 |
| ATOM | 2046 | CA  | GLY | 1698 | 28.115 | 1.143  | 19.396 | 1.00 | 30.79 |
| ATOM | 2047 | C   | GLY | 1698 | 27.743 | 2.212  | 18.388 | 1.00 | 32.38 |
| ATOM | 2048 | O   | GLY | 1698 | 26.817 | 2.044  | 17.601 | 1.00 | 33.26 |
| ATOM | 2049 | N   | SER | 1699 | 28.480 | 3.314  | 18.411 | 1.00 | 30.81 |
| ATOM | 2051 | CA  | SER | 1699 | 28.268 | 4.437  | 17.510 | 1.00 | 32.03 |
| ATOM | 2052 | CB  | SER | 1699 | 28.528 | 5.728  | 18.288 | 1.00 | 34.81 |
| ATOM | 2053 | OG  | SER | 1699 | 28.559 | 6.862  | 17.440 | 1.00 | 40.03 |
| ATOM | 2055 | C   | SER | 1699 | 29.198 | 4.325  | 16.282 | 1.00 | 32.20 |
| ATOM | 2056 | O   | SER | 1699 | 30.428 | 4.325  | 16.408 | 1.00 | 31.67 |
| ATOM | 2057 | N   | PRO | 1700 | 28.620 | 4.148  | 15.082 | 1.00 | 32.62 |
| ATOM | 2058 | CD  | PRO | 1700 | 27.178 | 4.142  | 14.773 | 1.00 | 34.19 |
| ATOM | 2059 | CA  | PRO | 1700 | 29.422 | 4.028  | 13.856 | 1.00 | 31.76 |
| ATOM | 2060 | CB  | PRO | 1700 | 28.357 | 3.830  | 12.759 | 1.00 | 32.04 |
| ATOM | 2061 | CG  | PRO | 1700 | 27.145 | 3.351  | 13.502 | 1.00 | 33.17 |
| ATOM | 2062 | C   | PRO | 1700 | 30.214 | 5.309  | 13.609 | 1.00 | 28.70 |
| ATOM | 2063 | O   | PRO | 1700 | 29.715 | 6.391  | 13.871 | 1.00 | 28.57 |
| ATOM | 2064 | N   | TYR | 1701 | 31.459 | 5.181  | 13.164 | 1.00 | 28.61 |
| ATOM | 2066 | CA  | TYR | 1701 | 32.311 | 6.338  | 12.870 | 1.00 | 29.92 |
| ATOM | 2067 | CB  | TYR | 1701 | 31.920 | 6.946  | 11.510 | 1.00 | 30.15 |
| ATOM | 2068 | CG  | TYR | 1701 | 31.965 | 5.994  | 10.339 | 1.00 | 36.17 |
| ATOM | 2069 | CD1 | TYR | 1701 | 30.799 | 5.630  | 9.664  | 1.00 | 39.26 |
| ATOM | 2070 | CE1 | TYR | 1701 | 30.839 | 4.767  | 8.571  | 1.00 | 41.51 |
| ATOM | 2071 | CD2 | TYR | 1701 | 33.176 | 5.467  | 9.893  | 1.00 | 37.48 |
| ATOM | 2072 | CE2 | TYR | 1701 | 33.229 | 4.607  | 8.805  | 1.00 | 42.94 |
| ATOM | 2073 | CZ  | TYR | 1701 | 32.059 | 4.263  | 8.146  | 1.00 | 45.72 |
| ATOM | 2074 | OH  | TYR | 1701 | 32.110 | 3.431  | 7.043  | 1.00 | 53.99 |
| ATOM | 2076 | C   | TYR | 1701 | 32.279 | 7.448  | 13.941 | 1.00 | 31.09 |
| ATOM | 2077 | O   | TYR | 1701 | 31.935 | 8.592  | 13.649 | 1.00 | 31.93 |
| ATOM | 2078 | N   | PRO | 1702 | 32.649 | 7.135  | 15.189 | 1.00 | 34.66 |
| ATOM | 2079 | CD  | PRO | 1702 | 33.212 | 5.879  | 15.708 | 1.00 | 36.83 |
| ATOM | 2080 | CA  | PRO | 1702 | 32.631 | 8.173  | 16.231 | 1.00 | 33.54 |
| ATOM | 2081 | CB  | PRO | 1702 | 33.116 | 7.432  | 17.479 | 1.00 | 32.18 |
| ATOM | 2082 | CG  | PRO | 1702 | 32.903 | 6.001  | 17.175 | 1.00 | 40.82 |
| ATOM | 2083 | C   | PRO | 1702 | 33.628 | 9.274  | 15.883 | 1.00 | 34.78 |
| ATOM | 2084 | O   | PRO | 1702 | 34.750 | 8.981  | 15.455 | 1.00 | 33.97 |
| ATOM | 2085 | N   | GLY | 1703 | 33.220 | 10.528 | 16.074 | 1.00 | 36.45 |
| ATOM | 2087 | CA  | GLY | 1703 | 34.085 | 11.667 | 15.788 | 1.00 | 34.40 |
| ATOM | 2088 | C   | GLY | 1703 | 34.245 | 12.006 | 14.317 | 1.00 | 34.34 |
| ATOM | 2089 | O   | GLY | 1703 | 34.977 | 12.933 | 13.969 | 1.00 | 34.20 |
| ATOM | 2090 | N   | VAL | 1704 | 33.552 | 11.275 | 13.445 | 1.00 | 35.02 |
| ATOM | 2092 | CA  | VAL | 1704 | 33.641 | 11.512 | 12.007 | 1.00 | 32.77 |
| ATOM | 2093 | CB  | VAL | 1704 | 33.614 | 10.176 | 11.221 | 1.00 | 31.32 |
| ATOM | 2094 | CG1 | VAL | 1704 | 33.628 | 10.435 | 9.709  | 1.00 | 31.46 |
| ATOM | 2095 | CG2 | VAL | 1704 | 34.796 | 9.297  | 11.637 | 1.00 | 27.62 |
| ATOM | 2096 | C   | VAL | 1704 | 32.510 | 12.410 | 11.513 | 1.00 | 33.35 |
| ATOM | 2097 | O   | VAL | 1704 | 31.337 | 12.070 | 11.640 | 1.00 | 33.94 |
| ATOM | 2098 | N   | PRO | 1705 | 32.849 | 13.589 | 10.974 | 1.00 | 32.43 |
| ATOM | 2099 | CD  | PRO | 1705 | 34.181 | 14.221 | 10.949 | 1.00 | 32.77 |
| ATOM | 2100 | CA  | PRO | 1705 | 31.826 | 14.505 | 10.472 | 1.00 | 33.61 |
| ATOM | 2101 | CB  | PRO | 1705 | 32.545 | 15.853 | 10.509 | 1.00 | 33.21 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 2102 | CG  | PRO | 1705 | 33.935 | 15.482 | 10.141 | 1.00 | 35.53 |
| ATOM | 2103 | C   | PRO | 1705 | 31.395 | 14.138 | 9.052  | 1.00 | 33.91 |
| ATOM | 2104 | O   | PRO | 1705 | 32.113 | 13.409 | 8.354  | 1.00 | 32.65 |
| ATOM | 2105 | N   | VAL | 1706 | 30.255 | 14.684 | 8.619  | 1.00 | 33.82 |
| ATOM | 2107 | CA  | VAL | 1706 | 29.689 | 14.447 | 7.280  | 1.00 | 33.97 |
| ATOM | 2108 | CB  | VAL | 1706 | 28.617 | 15.513 | 6.943  | 1.00 | 37.41 |
| ATOM | 2109 | CG1 | VAL | 1706 | 28.045 | 15.282 | 5.556  | 1.00 | 41.12 |
| ATOM | 2110 | CG2 | VAL | 1706 | 27.507 | 15.484 | 7.971  | 1.00 | 38.89 |
| ATOM | 2111 | C   | VAL | 1706 | 30.712 | 14.428 | 6.135  | 1.00 | 32.32 |
| ATOM | 2112 | O   | VAL | 1706 | 30.819 | 13.450 | 5.398  | 1.00 | 32.58 |
| ATOM | 2113 | N   | GLU | 1707 | 31.477 | 15.504 | 6.004  | 1.00 | 31.15 |
| ATOM | 2115 | CA  | GLU | 1707 | 32.478 | 15.630 | 4.956  | 1.00 | 29.82 |
| ATOM | 2116 | CB  | GLU | 1707 | 33.172 | 16.989 | 5.048  | 1.00 | 30.05 |
| ATOM | 2117 | C   | GLU | 1707 | 33.531 | 14.541 | 4.959  | 1.00 | 28.52 |
| ATOM | 2118 | O   | GLU | 1707 | 33.995 | 14.134 | 3.896  | 1.00 | 30.85 |
| ATOM | 2119 | N   | GLU | 1708 | 33.958 | 14.110 | 6.143  | 1.00 | 28.70 |
| ATOM | 2121 | CA  | GLU | 1708 | 34.978 | 13.073 | 6.235  | 1.00 | 29.50 |
| ATOM | 2122 | CB  | GLU | 1708 | 35.590 | 13.010 | 7.641  | 1.00 | 31.28 |
| ATOM | 2123 | CG  | GLU | 1708 | 36.281 | 14.289 | 8.103  | 1.00 | 41.63 |
| ATOM | 2124 | CD  | GLU | 1708 | 37.454 | 14.718 | 7.237  | 1.00 | 49.91 |
| ATOM | 2125 | OE1 | GLU | 1708 | 38.020 | 13.876 | 6.498  | 1.00 | 53.57 |
| ATOM | 2126 | OE2 | GLU | 1708 | 37.821 | 15.916 | 7.308  | 1.00 | 58.45 |
| ATOM | 2127 | C   | GLU | 1708 | 34.365 | 11.730 | 5.878  | 1.00 | 30.00 |
| ATOM | 2128 | O   | GLU | 1708 | 35.016 | 10.874 | 5.257  | 1.00 | 28.43 |
| ATOM | 2129 | N   | LEU | 1709 | 33.103 | 11.559 | 6.257  | 1.00 | 30.08 |
| ATOM | 2131 | CA  | LEU | 1709 | 32.392 | 10.324 | 5.964  | 1.00 | 29.19 |
| ATOM | 2132 | CB  | LEU | 1709 | 30.995 | 10.347 | 6.592  | 1.00 | 28.97 |
| ATOM | 2133 | CG  | LEU | 1709 | 30.109 | 9.186  | 6.137  | 1.00 | 30.66 |
| ATOM | 2134 | CD1 | LEU | 1709 | 30.664 | 7.866  | 6.659  | 1.00 | 29.24 |
| ATOM | 2135 | CD2 | LEU | 1709 | 28.684 | 9.403  | 6.593  | 1.00 | 29.29 |
| ATOM | 2136 | C   | LEU | 1709 | 32.294 | 10.130 | 4.449  | 1.00 | 28.26 |
| ATOM | 2137 | O   | LEU | 1709 | 32.450 | 9.011  | 3.948  | 1.00 | 28.86 |
| ATOM | 2138 | N   | PHE | 1710 | 32.016 | 11.220 | 3.735  | 1.00 | 26.86 |
| ATOM | 2140 | CA  | PHE | 1710 | 31.903 | 11.192 | 2.285  | 1.00 | 28.86 |
| ATOM | 2141 | CB  | PHE | 1710 | 31.632 | 12.593 | 1.743  | 1.00 | 31.88 |
| ATOM | 2142 | CG  | PHE | 1710 | 30.249 | 13.095 | 2.014  | 1.00 | 37.62 |
| ATOM | 2143 | CD1 | PHE | 1710 | 29.265 | 12.247 | 2.509  | 1.00 | 42.63 |
| ATOM | 2144 | CD2 | PHE | 1710 | 29.931 | 14.424 | 1.792  | 1.00 | 43.53 |
| ATOM | 2145 | CE1 | PHE | 1710 | 27.977 | 12.718 | 2.783  | 1.00 | 45.99 |
| ATOM | 2146 | CE2 | PHE | 1710 | 28.648 | 14.905 | 2.061  | 1.00 | 46.25 |
| ATOM | 2147 | CZ  | PHE | 1710 | 27.670 | 14.045 | 2.559  | 1.00 | 44.45 |
| ATOM | 2148 | C   | PHE | 1710 | 33.193 | 10.660 | 1.681  | 1.00 | 30.42 |
| ATOM | 2149 | O   | PHE | 1710 | 33.174 | 9.807  | 0.792  | 1.00 | 29.01 |
| ATOM | 2150 | N   | LYS | 1711 | 34.309 | 11.152 | 2.212  | 1.00 | 30.64 |
| ATOM | 2152 | CA  | LYS | 1711 | 35.650 | 10.762 | 1.786  | 1.00 | 32.89 |
| ATOM | 2153 | CB  | LYS | 1711 | 36.670 | 11.655 | 2.502  | 1.00 | 37.91 |
| ATOM | 2154 | CG  | LYS | 1711 | 38.108 | 11.479 | 2.088  | 1.00 | 42.99 |
| ATOM | 2155 | CD  | LYS | 1711 | 38.976 | 12.528 | 2.752  | 1.00 | 47.45 |
| ATOM | 2156 | CE  | LYS | 1711 | 40.380 | 12.505 | 2.182  | 1.00 | 52.35 |
| ATOM | 2157 | NZ  | LYS | 1711 | 41.104 | 11.272 | 2.587  | 1.00 | 58.47 |
| ATOM | 2161 | C   | LYS | 1711 | 35.913 | 9.273  | 2.071  | 1.00 | 32.23 |
| ATOM | 2162 | O   | LYS | 1711 | 36.445 | 8.559  | 1.216  | 1.00 | 30.79 |
| ATOM | 2163 | N   | LEU | 1712 | 35.533 | 8.807  | 3.264  | 1.00 | 31.37 |
| ATOM | 2165 | CA  | LEU | 1712 | 35.704 | 7.399  | 3.630  | 1.00 | 29.46 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 2166 | CB  | LEU | 1712 | 35.220 | 7.117  | 5.065  | 1.00 | 28.57 |
| ATOM | 2167 | CG  | LEU | 1712 | 36.045 | 7.662  | 6.242  | 1.00 | 30.18 |
| ATOM | 2168 | CD1 | LEU | 1712 | 35.395 | 7.349  | 7.569  | 1.00 | 26.92 |
| ATOM | 2169 | CD2 | LEU | 1712 | 37.452 | 7.083  | 6.210  | 1.00 | 30.88 |
| ATOM | 2170 | C   | LEU | 1712 | 34.922 | 6.539  | 2.651  | 1.00 | 28.99 |
| ATOM | 2171 | O   | LEU | 1712 | 35.438 | 5.551  | 2.136  | 1.00 | 30.73 |
| ATOM | 2172 | N   | LEU | 1713 | 33.675 | 6.915  | 2.388  | 1.00 | 30.13 |
| ATOM | 2174 | CA  | LEU | 1713 | 32.851 | 6.158  | 1.456  | 1.00 | 32.10 |
| ATOM | 2175 | CB  | LEU | 1713 | 31.411 | 6.685  | 1.443  | 1.00 | 35.23 |
| ATOM | 2176 | CG  | LEU | 1713 | 30.612 | 6.292  | 2.691  | 1.00 | 37.47 |
| ATOM | 2177 | CD1 | LEU | 1713 | 29.265 | 6.982  | 2.720  | 1.00 | 40.85 |
| ATOM | 2178 | CD2 | LEU | 1713 | 30.447 | 4.788  | 2.723  | 1.00 | 39.61 |
| ATOM | 2179 | C   | LEU | 1713 | 33.441 | 6.147  | 0.047  | 1.00 | 32.70 |
| ATOM | 2180 | O   | LEU | 1713 | 33.548 | 5.090  | -0.578 | 1.00 | 31.86 |
| ATOM | 2181 | N   | LYS | 1714 | 33.859 | 7.309  | -0.444 | 1.00 | 32.42 |
| ATOM | 2183 | CA  | LYS | 1714 | 34.440 | 7.387  | -1.776 | 1.00 | 32.56 |
| ATOM | 2184 | CB  | LYS | 1714 | 34.826 | 8.824  | -2.112 | 1.00 | 33.02 |
| ATOM | 2185 | CG  | LYS | 1714 | 33.640 | 9.736  | -2.297 | 1.00 | 35.56 |
| ATOM | 2186 | CD  | LYS | 1714 | 32.736 | 9.235  | -3.396 | 1.00 | 37.94 |
| ATOM | 2187 | CE  | LYS | 1714 | 31.635 | 10.246 | -3.682 | 1.00 | 42.57 |
| ATOM | 2188 | NZ  | LYS | 1714 | 30.727 | 9.805  | -4.779 | 1.00 | 47.40 |
| ATOM | 2192 | C   | LYS | 1714 | 35.664 | 6.488  | -1.885 | 1.00 | 35.36 |
| ATOM | 2193 | O   | LYS | 1714 | 35.927 | 5.898  | -2.937 | 1.00 | 36.68 |
| ATOM | 2194 | N   | GLU | 1715 | 36.376 | 6.338  | -0.775 | 1.00 | 34.51 |
| ATOM | 2196 | CA  | GLU | 1715 | 37.577 | 5.527  | -0.749 | 1.00 | 35.31 |
| ATOM | 2197 | CB  | GLU | 1715 | 38.566 | 6.125  | 0.250  | 1.00 | 37.07 |
| ATOM | 2198 | CG  | GLU | 1715 | 38.967 | 7.537  | -0.163 | 1.00 | 43.62 |
| ATOM | 2199 | CD  | GLU | 1715 | 39.735 | 8.310  | 0.893  | 1.00 | 49.75 |
| ATOM | 2200 | OE1 | GLU | 1715 | 39.906 | 7.814  | 2.029  | 1.00 | 49.71 |
| ATOM | 2201 | OE2 | GLU | 1715 | 40.163 | 9.442  | 0.572  | 1.00 | 55.13 |
| ATOM | 2202 | C   | GLU | 1715 | 37.321 | 4.048  | -0.487 | 1.00 | 34.08 |
| ATOM | 2203 | O   | GLU | 1715 | 38.259 | 3.260  | -0.438 | 1.00 | 34.82 |
| ATOM | 2204 | N   | GLY | 1716 | 36.049 | 3.674  | -0.366 | 1.00 | 31.53 |
| ATOM | 2206 | CA  | GLY | 1716 | 35.695 | 2.288  | -0.133 | 1.00 | 27.58 |
| ATOM | 2207 | C   | GLY | 1716 | 35.966 | 1.765  | 1.262  | 1.00 | 28.60 |
| ATOM | 2208 | O   | GLY | 1716 | 36.069 | 0.560  | 1.464  | 1.00 | 27.81 |
| ATOM | 2209 | N   | HIS | 1717 | 36.062 | 2.663  | 2.236  | 1.00 | 29.10 |
| ATOM | 2211 | CA  | HIS | 1717 | 36.319 | 2.263  | 3.617  | 1.00 | 29.30 |
| ATOM | 2212 | CB  | HIS | 1717 | 36.501 | 3.510  | 4.486  | 1.00 | 30.54 |
| ATOM | 2213 | CG  | HIS | 1717 | 36.788 | 3.213  | 5.930  | 1.00 | 32.88 |
| ATOM | 2214 | CD2 | HIS | 1717 | 37.961 | 3.023  | 6.586  | 1.00 | 32.21 |
| ATOM | 2215 | ND1 | HIS | 1717 | 35.798 | 3.108  | 6.881  | 1.00 | 34.22 |
| ATOM | 2217 | CE1 | HIS | 1717 | 36.342 | 2.865  | 8.061  | 1.00 | 31.51 |
| ATOM | 2218 | NE2 | HIS | 1717 | 37.651 | 2.809  | 7.907  | 1.00 | 31.94 |
| ATOM | 2220 | C   | HIS | 1717 | 35.180 | 1.416  | 4.183  | 1.00 | 28.42 |
| ATOM | 2221 | O   | HIS | 1717 | 34.017 | 1.666  | 3.885  | 1.00 | 30.71 |
| ATOM | 2222 | N   | ARG | 1718 | 35.526 | 0.450  | 5.028  | 1.00 | 27.75 |
| ATOM | 2224 | CA  | ARG | 1718 | 34.559 | -0.423 | 5.688  | 1.00 | 27.58 |
| ATOM | 2225 | CB  | ARG | 1718 | 34.562 | -1.813 | 5.048  | 1.00 | 29.07 |
| ATOM | 2226 | CG  | ARG | 1718 | 34.078 | -1.860 | 3.597  | 1.00 | 28.39 |
| ATOM | 2227 | CD  | ARG | 1718 | 32.609 | -1.412 | 3.475  | 1.00 | 27.64 |
| ATOM | 2228 | NE  | ARG | 1718 | 32.091 | -1.467 | 2.096  | 1.00 | 24.37 |
| ATOM | 2230 | CZ  | ARG | 1718 | 32.173 | -0.476 | 1.210  | 1.00 | 24.26 |
| ATOM | 2231 | NH1 | ARG | 1718 | 32.768 | 0.668  | 1.532  | 1.00 | 23.98 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2234 | NH2 | ARG | 1718 | 31.595 | -0.603  | 0.019  | 1.00 | 21.60 |
| ATOM | 2237 | C   | ARG | 1718 | 35.005 | -0.521  | 7.148  | 1.00 | 30.11 |
| ATOM | 2238 | O   | ARG | 1718 | 36.201 | -0.623  | 7.428  | 1.00 | 30.60 |
| ATOM | 2239 | N   | MET | 1719 | 34.056 | -0.430  | 8.074  | 1.00 | 30.69 |
| ATOM | 2241 | CA  | MET | 1719 | 34.350 | -0.490  | 9.501  | 1.00 | 31.77 |
| ATOM | 2242 | CB  | MET | 1719 | 33.072 | -0.302  | 10.335 | 1.00 | 34.56 |
| ATOM | 2243 | CG  | MET | 1719 | 32.408 | 1.060   | 10.194 | 1.00 | 36.71 |
| ATOM | 2244 | SD  | MET | 1719 | 31.015 | 1.307   | 11.314 | 1.00 | 38.66 |
| ATOM | 2245 | CE  | MET | 1719 | 29.797 | 0.338   | 10.544 | 1.00 | 36.99 |
| ATOM | 2246 | C   | MET | 1719 | 34.998 | -1.810  | 9.854  | 1.00 | 30.20 |
| ATOM | 2247 | O   | MET | 1719 | 34.802 | -2.802  | 9.169  | 1.00 | 31.41 |
| ATOM | 2248 | N   | ASP | 1720 | 35.778 | -1.809  | 10.926 | 1.00 | 32.49 |
| ATOM | 2250 | CA  | ASP | 1720 | 36.473 | -3.008  | 11.385 | 1.00 | 33.60 |
| ATOM | 2251 | CB  | ASP | 1720 | 37.593 | -2.630  | 12.358 | 1.00 | 37.65 |
| ATOM | 2252 | CG  | ASP | 1720 | 38.628 | -1.688  | 11.747 | 1.00 | 44.69 |
| ATOM | 2253 | OD1 | ASP | 1720 | 38.442 | -1.223  | 10.596 | 1.00 | 50.97 |
| ATOM | 2254 | OD2 | ASP | 1720 | 39.632 | -1.398  | 12.443 | 1.00 | 48.67 |
| ATOM | 2255 | C   | ASP | 1720 | 35.524 | -3.977  | 12.079 | 1.00 | 31.26 |
| ATOM | 2256 | O   | ASP | 1720 | 34.466 | -3.581  | 12.561 | 1.00 | 32.69 |
| ATOM | 2257 | N   | LYS | 1721 | 35.943 | -5.231  | 12.191 | 1.00 | 32.76 |
| ATOM | 2259 | CA  | LYS | 1721 | 35.133 | -6.261  | 12.825 | 1.00 | 32.28 |
| ATOM | 2260 | CB  | LYS | 1721 | 35.726 | -7.649  | 12.575 | 1.00 | 33.63 |
| ATOM | 2261 | CG  | LYS | 1721 | 34.854 | -8.773  | 13.125 | 1.00 | 35.68 |
| ATOM | 2262 | CD  | LYS | 1721 | 35.392 | -10.126 | 12.784 | 1.00 | 36.22 |
| ATOM | 2263 | CE  | LYS | 1721 | 36.054 | -10.749 | 13.988 | 1.00 | 42.65 |
| ATOM | 2264 | NZ  | LYS | 1721 | 36.354 | -12.189 | 13.756 | 1.00 | 46.15 |
| ATOM | 2268 | C   | LYS | 1721 | 35.039 | -6.051  | 14.315 | 1.00 | 35.55 |
| ATOM | 2269 | O   | LYS | 1721 | 36.064 | -5.926  | 14.986 | 1.00 | 37.78 |
| ATOM | 2270 | N   | PRO | 1722 | 33.807 | -6.017  | 14.861 | 1.00 | 36.91 |
| ATOM | 2271 | CD  | PRO | 1722 | 32.504 | -6.105  | 14.179 | 1.00 | 34.43 |
| ATOM | 2272 | CA  | PRO | 1722 | 33.630 | -5.827  | 16.305 | 1.00 | 37.77 |
| ATOM | 2273 | CB  | PRO | 1722 | 32.107 | -5.846  | 16.465 | 1.00 | 36.32 |
| ATOM | 2274 | CG  | PRO | 1722 | 31.603 | -5.375  | 15.122 | 1.00 | 34.53 |
| ATOM | 2275 | C   | PRO | 1722 | 34.246 | -7.026  | 17.023 | 1.00 | 39.31 |
| ATOM | 2276 | O   | PRO | 1722 | 34.274 | -8.136  | 16.477 | 1.00 | 38.78 |
| ATOM | 2277 | N   | SER | 1723 | 34.777 | -6.820  | 18.222 | 1.00 | 42.72 |
| ATOM | 2279 | CA  | SER | 1723 | 35.336 | -7.954  | 18.940 | 1.00 | 45.01 |
| ATOM | 2280 | CB  | SER | 1723 | 36.152 | -7.508  | 20.160 | 1.00 | 46.88 |
| ATOM | 2281 | OG  | SER | 1723 | 35.327 | -7.027  | 21.208 | 1.00 | 53.47 |
| ATOM | 2283 | C   | SER | 1723 | 34.088 | -8.731  | 19.359 | 1.00 | 46.67 |
| ATOM | 2284 | O   | SER | 1723 | 32.982 | -8.172  | 19.417 | 1.00 | 46.21 |
| ATOM | 2285 | N   | ASN | 1724 | 34.237 | -10.025 | 19.590 | 1.00 | 47.80 |
| ATOM | 2287 | CA  | ASN | 1724 | 33.092 | -10.826 | 19.999 | 1.00 | 52.78 |
| ATOM | 2288 | CB  | ASN | 1724 | 32.559 | -10.319 | 21.355 | 1.00 | 57.86 |
| ATOM | 2289 | CG  | ASN | 1724 | 33.679 | -10.091 | 22.370 | 1.00 | 61.99 |
| ATOM | 2290 | OD1 | ASN | 1724 | 34.531 | -10.959 | 22.585 | 1.00 | 63.17 |
| ATOM | 2291 | ND2 | ASN | 1724 | 33.712 | -8.899  | 22.953 | 1.00 | 63.56 |
| ATOM | 2294 | C   | ASN | 1724 | 32.015 | -10.779 | 18.893 | 1.00 | 51.43 |
| ATOM | 2295 | O   | ASN | 1724 | 30.859 | -10.423 | 19.108 | 1.00 | 51.56 |
| ATOM | 2296 | N   | CYS | 1725 | 32.454 | -11.087 | 17.683 | 1.00 | 48.91 |
| ATOM | 2298 | CA  | CYS | 1725 | 31.600 | -11.136 | 16.508 | 1.00 | 45.62 |
| ATOM | 2299 | CB  | CYS | 1725 | 31.526 | -9.771  | 15.811 | 1.00 | 44.83 |
| ATOM | 2300 | SG  | CYS | 1725 | 30.693 | -9.816  | 14.194 | 1.00 | 41.83 |
| ATOM | 2301 | C   | CYS | 1725 | 32.341 | -12.135 | 15.640 | 1.00 | 42.30 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2302 | O   | CYS | 1725 | 33.566 | -12.045 | 15.493 | 1.00 | 44.63 |
| ATOM | 2303 | N   | THR | 1726 | 31.627 | -13.134 | 15.141 | 1.00 | 37.46 |
| ATOM | 2305 | CA  | THR | 1726 | 32.259 | -14.153 | 14.320 | 1.00 | 35.29 |
| ATOM | 2306 | CB  | THR | 1726 | 31.339 | -15.367 | 14.132 | 1.00 | 33.44 |
| ATOM | 2307 | OG1 | THR | 1726 | 30.109 | -14.952 | 13.523 | 1.00 | 34.77 |
| ATOM | 2309 | CG2 | THR | 1726 | 31.070 | -16.019 | 15.454 | 1.00 | 30.22 |
| ATOM | 2310 | C   | THR | 1726 | 32.668 | -13.622 | 12.963 | 1.00 | 33.53 |
| ATOM | 2311 | O   | THR | 1726 | 32.158 | -12.593 | 12.518 | 1.00 | 32.93 |
| ATOM | 2312 | N   | ASN | 1727 | 33.619 | -14.294 | 12.319 | 1.00 | 32.72 |
| ATOM | 2314 | CA  | ASN | 1727 | 34.030 | -13.867 | 10.983 | 1.00 | 35.91 |
| ATOM | 2315 | CB  | ASN | 1727 | 35.166 | -14.724 | 10.422 | 1.00 | 40.64 |
| ATOM | 2316 | CG  | ASN | 1727 | 36.463 | -14.533 | 11.168 | 1.00 | 46.52 |
| ATOM | 2317 | OD1 | ASN | 1727 | 37.047 | -13.453 | 11.158 | 1.00 | 49.98 |
| ATOM | 2318 | ND2 | ASN | 1727 | 36.931 | -15.592 | 11.814 | 1.00 | 49.04 |
| ATOM | 2321 | C   | ASN | 1727 | 32.824 | -14.006 | 10.058 | 1.00 | 34.27 |
| ATOM | 2322 | O   | ASN | 1727 | 32.681 | -13.236 | 9.116  | 1.00 | 32.96 |
| ATOM | 2323 | N   | GLU | 1728 | 31.969 | -14.997 | 10.326 | 1.00 | 32.49 |
| ATOM | 2325 | CA  | GLU | 1728 | 30.778 | -15.235 | 9.510  | 1.00 | 31.99 |
| ATOM | 2326 | CB  | GLU | 1728 | 30.064 | -16.504 | 9.975  | 1.00 | 34.15 |
| ATOM | 2327 | CG  | GLU | 1728 | 28.836 | -16.866 | 9.156  | 1.00 | 35.63 |
| ATOM | 2328 | CD  | GLU | 1728 | 28.187 | -18.169 | 9.608  | 1.00 | 39.72 |
| ATOM | 2329 | OE1 | GLU | 1728 | 28.200 | -18.463 | 10.824 | 1.00 | 42.25 |
| ATOM | 2330 | OE2 | GLU | 1728 | 27.654 | -18.896 | 8.742  | 1.00 | 39.87 |
| ATOM | 2331 | C   | GLU | 1728 | 29.814 | -14.049 | 9.549  | 1.00 | 30.76 |
| ATOM | 2332 | O   | GLU | 1728 | 29.309 | -13.602 | 8.512  | 1.00 | 29.58 |
| ATOM | 2333 | N   | LEU | 1729 | 29.559 | -13.544 | 10.750 | 1.00 | 30.01 |
| ATOM | 2335 | CA  | LEU | 1729 | 28.670 | -12.408 | 10.911 | 1.00 | 30.21 |
| ATOM | 2336 | CB  | LEU | 1729 | 28.225 | -12.272 | 12.364 | 1.00 | 30.13 |
| ATOM | 2337 | CG  | LEU | 1729 | 27.208 | -13.350 | 12.748 | 1.00 | 33.61 |
| ATOM | 2338 | CD1 | LEU | 1729 | 27.119 | -13.483 | 14.262 | 1.00 | 33.71 |
| ATOM | 2339 | CD2 | LEU | 1729 | 25.844 | -13.021 | 12.139 | 1.00 | 30.31 |
| ATOM | 2340 | C   | LEU | 1729 | 29.316 | -11.133 | 10.390 | 1.00 | 30.26 |
| ATOM | 2341 | O   | LEU | 1729 | 28.619 | -10.229 | 9.938  | 1.00 | 28.89 |
| ATOM | 2342 | N   | TYR | 1730 | 30.648 | -11.063 | 10.435 | 1.00 | 28.91 |
| ATOM | 2344 | CA  | TYR | 1730 | 31.343 | -9.893  | 9.912  | 1.00 | 28.91 |
| ATOM | 2345 | CB  | TYR | 1730 | 32.804 | -9.861  | 10.359 | 1.00 | 29.09 |
| ATOM | 2346 | CG  | TYR | 1730 | 33.537 | -8.639  | 9.857  | 1.00 | 30.15 |
| ATOM | 2347 | CD1 | TYR | 1730 | 33.037 | -7.358  | 10.103 | 1.00 | 29.97 |
| ATOM | 2348 | CE1 | TYR | 1730 | 33.688 | -6.227  | 9.626  | 1.00 | 28.99 |
| ATOM | 2349 | CD2 | TYR | 1730 | 34.716 | -8.757  | 9.119  | 1.00 | 29.24 |
| ATOM | 2350 | CE2 | TYR | 1730 | 35.386 | -7.620  | 8.632  | 1.00 | 28.25 |
| ATOM | 2351 | CZ  | TYR | 1730 | 34.861 | -6.362  | 8.889  | 1.00 | 28.41 |
| ATOM | 2352 | OH  | TYR | 1730 | 35.485 | -5.227  | 8.405  | 1.00 | 31.64 |
| ATOM | 2354 | C   | TYR | 1730 | 31.260 | -9.943  | 8.379  | 1.00 | 27.10 |
| ATOM | 2355 | O   | TYR | 1730 | 31.078 | -8.920  | 7.726  | 1.00 | 27.46 |
| ATOM | 2356 | N   | MET | 1731 | 31.390 | -11.138 | 7.813  | 1.00 | 26.68 |
| ATOM | 2358 | CA  | MET | 1731 | 31.298 | -11.315 | 6.372  | 1.00 | 28.68 |
| ATOM | 2359 | CB  | MET | 1731 | 31.526 | -12.778 | 5.989  | 1.00 | 35.43 |
| ATOM | 2360 | CG  | MET | 1731 | 31.158 | -13.087 | 4.545  | 1.00 | 46.19 |
| ATOM | 2361 | SD  | MET | 1731 | 31.441 | -14.804 | 4.064  | 1.00 | 60.10 |
| ATOM | 2362 | CE  | MET | 1731 | 32.603 | -14.550 | 2.678  | 1.00 | 58.31 |
| ATOM | 2363 | C   | MET | 1731 | 29.917 | -10.858 | 5.912  | 1.00 | 27.42 |
| ATOM | 2364 | O   | MET | 1731 | 29.782 | -10.227 | 4.871  | 1.00 | 30.80 |
| ATOM | 2365 | N   | MET | 1732 | 28.893 | -11.191 | 6.688  | 1.00 | 28.53 |



|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2367 | CA  | MET | 1732 | 27.522 | -10.777 | 6.389  | 1.00 | 26.47 |
| ATOM | 2368 | CB  | MET | 1732 | 26.562 | -11.308 | 7.458  | 1.00 | 25.79 |
| ATOM | 2369 | CG  | MET | 1732 | 25.116 | -10.838 | 7.274  | 1.00 | 26.01 |
| ATOM | 2370 | SD  | MET | 1732 | 24.004 | -11.550 | 8.469  | 1.00 | 26.22 |
| ATOM | 2371 | CE  | MET | 1732 | 23.787 | -13.195 | 7.783  | 1.00 | 23.74 |
| ATOM | 2372 | C   | MET | 1732 | 27.445 | -9.243  | 6.319  | 1.00 | 25.15 |
| ATOM | 2373 | O   | MET | 1732 | 26.886 | -8.691  | 5.379  | 1.00 | 25.41 |
| ATOM | 2374 | N   | MET | 1733 | 28.024 | -8.564  | 7.308  | 1.00 | 26.48 |
| ATOM | 2376 | CA  | MET | 1733 | 28.057 | -7.104  | 7.331  | 1.00 | 27.09 |
| ATOM | 2377 | CB  | MET | 1733 | 28.903 | -6.594  | 8.488  | 1.00 | 25.91 |
| ATOM | 2378 | CG  | MET | 1733 | 28.235 | -6.556  | 9.824  | 1.00 | 31.64 |
| ATOM | 2379 | SD  | MET | 1733 | 29.442 | -6.111  | 11.094 | 1.00 | 29.59 |
| ATOM | 2380 | CE  | MET | 1733 | 28.886 | -7.126  | 12.420 | 1.00 | 28.14 |
| ATOM | 2381 | C   | MET | 1733 | 28.720 | -6.613  | 6.056  | 1.00 | 28.43 |
| ATOM | 2382 | O   | MET | 1733 | 28.185 | -5.753  | 5.372  | 1.00 | 31.37 |
| ATOM | 2383 | N   | ARG | 1734 | 29.891 | -7.169  | 5.747  | 1.00 | 28.57 |
| ATOM | 2385 | CA  | ARG | 1734 | 30.642 | -6.783  | 4.551  | 1.00 | 27.00 |
| ATOM | 2386 | CB  | ARG | 1734 | 32.007 | -7.488  | 4.510  | 1.00 | 25.98 |
| ATOM | 2387 | CG  | ARG | 1734 | 32.927 | -7.154  | 5.707  | 1.00 | 28.13 |
| ATOM | 2388 | CD  | ARG | 1734 | 33.229 | -5.672  | 5.765  | 1.00 | 29.97 |
| ATOM | 2389 | NE  | ARG | 1734 | 33.922 | -5.256  | 4.553  | 1.00 | 40.49 |
| ATOM | 2391 | CZ  | ARG | 1734 | 35.238 | -5.361  | 4.363  | 1.00 | 43.95 |
| ATOM | 2392 | NH1 | ARG | 1734 | 36.023 | -5.853  | 5.318  | 1.00 | 41.81 |
| ATOM | 2395 | NH2 | ARG | 1734 | 35.760 | -5.048  | 3.184  | 1.00 | 46.20 |
| ATOM | 2398 | C   | ARG | 1734 | 29.859 | -7.037  | 3.268  | 1.00 | 24.57 |
| ATOM | 2399 | O   | ARG | 1734 | 29.992 | -6.290  | 2.314  | 1.00 | 24.94 |
| ATOM | 2400 | N   | ASP | 1735 | 29.071 | -8.107  | 3.235  | 1.00 | 24.79 |
| ATOM | 2402 | CA  | ASP | 1735 | 28.254 | -8.420  | 2.061  | 1.00 | 23.88 |
| ATOM | 2403 | CB  | ASP | 1735 | 27.669 | -9.830  | 2.150  | 1.00 | 25.95 |
| ATOM | 2404 | CG  | ASP | 1735 | 28.724 | -10.913 | 2.024  | 1.00 | 27.60 |
| ATOM | 2405 | OD1 | ASP | 1735 | 29.842 | -10.632 | 1.529  | 1.00 | 27.75 |
| ATOM | 2406 | OD2 | ASP | 1735 | 28.432 | -12.051 | 2.430  | 1.00 | 28.90 |
| ATOM | 2407 | C   | ASP | 1735 | 27.139 | -7.396  | 1.941  | 1.00 | 22.61 |
| ATOM | 2408 | O   | ASP | 1735 | 26.777 | -6.996  | 0.833  | 1.00 | 22.66 |
| ATOM | 2409 | N   | CYS | 1736 | 26.611 | -6.965  | 3.085  | 1.00 | 20.61 |
| ATOM | 2411 | CA  | CYS | 1736 | 25.561 | -5.952  | 3.109  | 1.00 | 23.63 |
| ATOM | 2412 | CB  | CYS | 1736 | 25.007 | -5.767  | 4.534  | 1.00 | 21.98 |
| ATOM | 2413 | SG  | CYS | 1736 | 23.934 | -7.126  | 5.111  | 1.00 | 22.95 |
| ATOM | 2414 | C   | CYS | 1736 | 26.129 | -4.633  | 2.599  | 1.00 | 23.62 |
| ATOM | 2415 | O   | CYS | 1736 | 25.403 | -3.797  | 2.047  | 1.00 | 22.15 |
| ATOM | 2416 | N   | TRP | 1737 | 27.438 | -4.461  | 2.775  | 1.00 | 24.37 |
| ATOM | 2418 | CA  | TRP | 1737 | 28.123 | -3.247  | 2.342  | 1.00 | 23.77 |
| ATOM | 2419 | CB  | TRP | 1737 | 29.162 | -2.810  | 3.371  | 1.00 | 19.38 |
| ATOM | 2420 | CG  | TRP | 1737 | 28.601 | -2.520  | 4.718  | 1.00 | 21.62 |
| ATOM | 2421 | CD2 | TRP | 1737 | 29.268 | -2.688  | 5.971  | 1.00 | 24.81 |
| ATOM | 2422 | CE2 | TRP | 1737 | 28.371 | -2.278  | 6.980  | 1.00 | 25.95 |
| ATOM | 2423 | CE3 | TRP | 1737 | 30.534 | -3.165  | 6.340  | 1.00 | 29.02 |
| ATOM | 2424 | CD1 | TRP | 1737 | 27.359 | -2.024  | 5.007  | 1.00 | 23.21 |
| ATOM | 2425 | NE1 | TRP | 1737 | 27.213 | -1.876  | 6.362  | 1.00 | 21.80 |
| ATOM | 2427 | CZ2 | TRP | 1737 | 28.710 | -2.305  | 8.347  | 1.00 | 26.68 |
| ATOM | 2428 | CZ3 | TRP | 1737 | 30.873 | -3.198  | 7.699  | 1.00 | 31.06 |
| ATOM | 2429 | CH2 | TRP | 1737 | 29.959 | -2.774  | 8.685  | 1.00 | 30.18 |
| ATOM | 2430 | C   | TRP | 1737 | 28.788 | -3.372  | 0.978  | 1.00 | 24.88 |
| ATOM | 2431 | O   | TRP | 1737 | 29.737 | -2.646  | 0.689  | 1.00 | 25.11 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2432 | N   | HIS | 1738 | 28.303 | -4.278  | 0.132  | 1.00 | 25.27 |
| ATOM | 2434 | CA  | HIS | 1738 | 28.888 | -4.406  | -1.191 | 1.00 | 24.27 |
| ATOM | 2435 | CB  | HIS | 1738 | 28.280 | -5.573  | -1.986 | 1.00 | 25.24 |
| ATOM | 2436 | CG  | HIS | 1738 | 29.179 | -6.073  | -3.081 | 1.00 | 26.28 |
| ATOM | 2437 | CD2 | HIS | 1738 | 29.727 | -5.437  | -4.147 | 1.00 | 25.67 |
| ATOM | 2438 | ND1 | HIS | 1738 | 29.697 | -7.352  | -3.098 | 1.00 | 27.55 |
| ATOM | 2440 | CE1 | HIS | 1738 | 30.528 | -7.478  | -4.117 | 1.00 | 27.51 |
| ATOM | 2441 | NE2 | HIS | 1738 | 30.564 | -6.329  | -4.770 | 1.00 | 30.93 |
| ATOM | 2443 | C   | HIS | 1738 | 28.715 | -3.087  | -1.953 | 1.00 | 25.59 |
| ATOM | 2444 | O   | HIS | 1738 | 27.659 | -2.451  | -1.905 | 1.00 | 22.01 |
| ATOM | 2445 | N   | ALA | 1739 | 29.784 | -2.651  | -2.612 | 1.00 | 23.84 |
| ATOM | 2447 | CA  | ALA | 1739 | 29.759 | -1.418  | -3.388 | 1.00 | 24.93 |
| ATOM | 2448 | CB  | ALA | 1739 | 31.131 | -1.177  | -4.024 | 1.00 | 26.39 |
| ATOM | 2449 | C   | ALA | 1739 | 28.671 | -1.508  | -4.462 | 1.00 | 25.35 |
| ATOM | 2450 | O   | ALA | 1739 | 27.963 | -0.535  | -4.727 | 1.00 | 28.20 |
| ATOM | 2451 | N   | VAL | 1740 | 28.543 | -2.680  | -5.073 | 1.00 | 22.68 |
| ATOM | 2453 | CA  | VAL | 1740 | 27.528 | -2.904  | -6.101 | 1.00 | 26.46 |
| ATOM | 2454 | CB  | VAL | 1740 | 27.995 | -3.968  | -7.117 | 1.00 | 29.70 |
| ATOM | 2455 | CG1 | VAL | 1740 | 27.063 | -4.003  | -8.334 | 1.00 | 26.01 |
| ATOM | 2456 | CG2 | VAL | 1740 | 29.433 | -3.686  | -7.537 | 1.00 | 31.22 |
| ATOM | 2457 | C   | VAL | 1740 | 26.213 | -3.358  | -5.443 | 1.00 | 25.07 |
| ATOM | 2458 | O   | VAL | 1740 | 26.138 | -4.474  | -4.903 | 1.00 | 23.55 |
| ATOM | 2459 | N   | PRO | 1741 | 25.155 | -2.519  | -5.514 | 1.00 | 25.30 |
| ATOM | 2460 | CD  | PRO | 1741 | 25.133 | -1.190  | -6.153 | 1.00 | 22.43 |
| ATOM | 2461 | CA  | PRO | 1741 | 23.844 | -2.833  | -4.921 | 1.00 | 24.09 |
| ATOM | 2462 | CB  | PRO | 1741 | 22.962 | -1.675  | -5.402 | 1.00 | 23.12 |
| ATOM | 2463 | CG  | PRO | 1741 | 23.928 | -0.527  | -5.491 | 1.00 | 22.04 |
| ATOM | 2464 | C   | PRO | 1741 | 23.272 | -4.191  | -5.313 | 1.00 | 22.18 |
| ATOM | 2465 | O   | PRO | 1741 | 22.727 | -4.900  | -4.466 | 1.00 | 21.23 |
| ATOM | 2466 | N   | SER | 1742 | 23.437 | -4.570  | -6.580 | 1.00 | 23.87 |
| ATOM | 2468 | CA  | SER | 1742 | 22.928 | -5.847  | -7.088 | 1.00 | 24.36 |
| ATOM | 2469 | CB  | SER | 1742 | 23.071 | -5.907  | -8.612 | 1.00 | 27.39 |
| ATOM | 2470 | OG  | SER | 1742 | 24.436 | -6.025  | -8.986 | 1.00 | 29.25 |
| ATOM | 2472 | C   | SER | 1742 | 23.636 | -7.058  | -6.488 | 1.00 | 23.96 |
| ATOM | 2473 | O   | SER | 1742 | 23.145 | -8.179  | -6.575 | 1.00 | 24.30 |
| ATOM | 2474 | N   | GLN | 1743 | 24.810 | -6.839  | -5.915 | 1.00 | 24.39 |
| ATOM | 2476 | CA  | GLN | 1743 | 25.558 | -7.934  | -5.345 | 1.00 | 23.15 |
| ATOM | 2477 | CB  | GLN | 1743 | 27.046 | -7.755  | -5.638 | 1.00 | 23.83 |
| ATOM | 2478 | CG  | GLN | 1743 | 27.359 | -7.784  | -7.126 | 1.00 | 22.84 |
| ATOM | 2479 | CD  | GLN | 1743 | 26.816 | -9.036  | -7.808 | 1.00 | 24.20 |
| ATOM | 2480 | OE1 | GLN | 1743 | 27.318 | -10.135 | -7.590 | 1.00 | 21.50 |
| ATOM | 2481 | NE2 | GLN | 1743 | 25.775 | -8.871  | -8.628 | 1.00 | 22.45 |
| ATOM | 2484 | C   | GLN | 1743 | 25.309 | -8.171  | -3.868 | 1.00 | 23.12 |
| ATOM | 2485 | O   | GLN | 1743 | 25.816 | -9.135  | -3.317 | 1.00 | 24.96 |
| ATOM | 2486 | N   | ARG | 1744 | 24.557 | -7.280  | -3.225 | 1.00 | 23.67 |
| ATOM | 2488 | CA  | ARG | 1744 | 24.242 | -7.424  | -1.806 | 1.00 | 22.11 |
| ATOM | 2489 | CB  | ARG | 1744 | 23.699 | -6.110  | -1.231 | 1.00 | 19.70 |
| ATOM | 2490 | CG  | ARG | 1744 | 24.672 | -4.959  | -1.338 | 1.00 | 21.26 |
| ATOM | 2491 | CD  | ARG | 1744 | 24.049 | -3.640  | -0.890 | 1.00 | 20.68 |
| ATOM | 2492 | NE  | ARG | 1744 | 24.923 | -2.552  | -1.305 | 1.00 | 25.21 |
| ATOM | 2494 | CZ  | ARG | 1744 | 24.540 | -1.313  | -1.583 | 1.00 | 24.30 |
| ATOM | 2495 | NH1 | ARG | 1744 | 23.257 | -0.955  | -1.481 | 1.00 | 22.04 |
| ATOM | 2498 | NH2 | ARG | 1744 | 25.450 | -0.448  | -2.036 | 1.00 | 21.29 |
| ATOM | 2501 | C   | ARG | 1744 | 23.184 | -8.505  | -1.640 | 1.00 | 22.53 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2502 | O   | ARG | 1744 | 22.437 | -8.800  | -2.588 | 1.00 | 23.08 |
| ATOM | 2503 | N   | PRO | 1745 | 23.162 | -9.170  | -0.467 | 1.00 | 20.76 |
| ATOM | 2504 | CD  | PRO | 1745 | 24.087 | -9.078  | 0.681  | 1.00 | 21.71 |
| ATOM | 2505 | CA  | PRO | 1745 | 22.160 | -10.207 | -0.243 | 1.00 | 22.34 |
| ATOM | 2506 | CB  | PRO | 1745 | 22.632 | -10.859 | 1.057  | 1.00 | 20.58 |
| ATOM | 2507 | CG  | PRO | 1745 | 23.298 | -9.727  | 1.783  | 1.00 | 20.36 |
| ATOM | 2508 | C   | PRO | 1745 | 20.814 | -9.512  | -0.048 | 1.00 | 23.62 |
| ATOM | 2509 | O   | PRO | 1745 | 20.759 | -8.318  | 0.255  | 1.00 | 25.29 |
| ATOM | 2510 | N   | THR | 1746 | 19.731 | -10.235 | -0.275 | 1.00 | 23.39 |
| ATOM | 2512 | CA  | THR | 1746 | 18.404 | -9.675  | -0.080 | 1.00 | 22.77 |
| ATOM | 2513 | CB  | THR | 1746 | 17.386 | -10.368 | -1.004 | 1.00 | 23.24 |
| ATOM | 2514 | OG1 | THR | 1746 | 17.409 | -11.783 | -0.763 | 1.00 | 23.11 |
| ATOM | 2516 | CG2 | THR | 1746 | 17.724 | -10.103 | -2.475 | 1.00 | 24.96 |
| ATOM | 2517 | C   | THR | 1746 | 18.009 | -9.954  | 1.365  | 1.00 | 24.98 |
| ATOM | 2518 | O   | THR | 1746 | 18.664 | -10.758 | 2.043  | 1.00 | 24.30 |
| ATOM | 2519 | N   | PHE | 1747 | 16.944 | -9.318  | 1.853  | 1.00 | 24.95 |
| ATOM | 2521 | CA  | PHE | 1747 | 16.501 | -9.596  | 3.221  | 1.00 | 25.16 |
| ATOM | 2522 | CB  | PHE | 1747 | 15.395 | -8.628  | 3.661  | 1.00 | 23.64 |
| ATOM | 2523 | CG  | PHE | 1747 | 15.916 | -7.283  | 4.089  | 1.00 | 24.34 |
| ATOM | 2524 | CD1 | PHE | 1747 | 16.715 | -7.167  | 5.226  | 1.00 | 21.21 |
| ATOM | 2525 | CD2 | PHE | 1747 | 15.649 | -6.137  | 3.334  | 1.00 | 21.42 |
| ATOM | 2526 | CE1 | PHE | 1747 | 17.252 | -5.932  | 5.597  | 1.00 | 20.99 |
| ATOM | 2527 | CE2 | PHE | 1747 | 16.178 | -4.907  | 3.699  | 1.00 | 20.36 |
| ATOM | 2528 | CZ  | PHE | 1747 | 16.985 | -4.807  | 4.840  | 1.00 | 19.30 |
| ATOM | 2529 | C   | PHE | 1747 | 16.034 | -11.049 | 3.311  | 1.00 | 23.57 |
| ATOM | 2530 | O   | PHE | 1747 | 16.182 | -11.702 | 4.344  | 1.00 | 25.32 |
| ATOM | 2531 | N   | LYS | 1748 | 15.520 | -11.573 | 2.202  | 1.00 | 23.19 |
| ATOM | 2533 | CA  | LYS | 1748 | 15.066 | -12.958 | 2.167  | 1.00 | 23.67 |
| ATOM | 2534 | CB  | LYS | 1748 | 14.462 | -13.285 | 0.799  | 1.00 | 26.67 |
| ATOM | 2535 | CG  | LYS | 1748 | 14.018 | -14.739 | 0.622  | 1.00 | 30.49 |
| ATOM | 2536 | CD  | LYS | 1748 | 13.642 | -14.996 | -0.837 | 1.00 | 38.98 |
| ATOM | 2537 | CE  | LYS | 1748 | 13.182 | -16.432 | -1.087 | 1.00 | 44.52 |
| ATOM | 2538 | NZ  | LYS | 1748 | 11.997 | -16.790 | -0.245 | 1.00 | 52.75 |
| ATOM | 2542 | C   | LYS | 1748 | 16.264 | -13.865 | 2.445  | 1.00 | 25.65 |
| ATOM | 2543 | O   | LYS | 1748 | 16.184 | -14.778 | 3.270  | 1.00 | 27.19 |
| ATOM | 2544 | N   | GLN | 1749 | 17.378 | -13.603 | 1.762  | 1.00 | 24.56 |
| ATOM | 2546 | CA  | GLN | 1749 | 18.588 | -14.397 | 1.950  | 1.00 | 26.33 |
| ATOM | 2547 | CB  | GLN | 1749 | 19.702 | -13.953 | 0.993  | 1.00 | 27.97 |
| ATOM | 2548 | CG  | GLN | 1749 | 19.416 | -14.066 | -0.484 | 1.00 | 37.31 |
| ATOM | 2549 | CD  | GLN | 1749 | 20.518 | -13.415 | -1.315 | 1.00 | 40.24 |
| ATOM | 2550 | OE1 | GLN | 1749 | 20.296 | -12.408 | -1.970 | 1.00 | 38.83 |
| ATOM | 2551 | NE2 | GLN | 1749 | 21.726 | -13.983 | -1.259 | 1.00 | 47.83 |
| ATOM | 2554 | C   | GLN | 1749 | 19.099 | -14.223 | 3.377  | 1.00 | 23.92 |
| ATOM | 2555 | O   | GLN | 1749 | 19.459 | -15.196 | 4.040  | 1.00 | 25.27 |
| ATOM | 2556 | N   | LEU | 1750 | 19.155 | -12.976 | 3.829  | 1.00 | 23.12 |
| ATOM | 2558 | CA  | LEU | 1750 | 19.641 | -12.662 | 5.175  | 1.00 | 24.34 |
| ATOM | 2559 | CB  | LEU | 1750 | 19.607 | -11.149 | 5.427  | 1.00 | 23.08 |
| ATOM | 2560 | CG  | LEU | 1750 | 20.633 | -10.311 | 4.665  | 1.00 | 23.84 |
| ATOM | 2561 | CD1 | LEU | 1750 | 20.274 | -8.806  | 4.724  | 1.00 | 22.10 |
| ATOM | 2562 | CD2 | LEU | 1750 | 22.013 | -10.586 | 5.246  | 1.00 | 24.91 |
| ATOM | 2563 | C   | LEU | 1750 | 18.840 | -13.400 | 6.236  | 1.00 | 27.40 |
| ATOM | 2564 | O   | LEU | 1750 | 19.408 | -13.915 | 7.211  | 1.00 | 27.11 |
| ATOM | 2565 | N   | VAL | 1751 | 17.527 | -13.482 | 6.031  | 1.00 | 26.83 |
| ATOM | 2567 | CA  | VAL | 1751 | 16.665 | -14.174 | 6.970  | 1.00 | 25.31 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2568 | CB  | VAL | 1751 | 15.176 | -13.994 | 6.599  | 1.00 | 25.87 |
| ATOM | 2569 | CG1 | VAL | 1751 | 14.304 | -14.975 | 7.382  | 1.00 | 28.43 |
| ATOM | 2570 | CG2 | VAL | 1751 | 14.746 | -12.593 | 6.934  | 1.00 | 21.52 |
| ATOM | 2571 | C   | VAL | 1751 | 17.047 | -15.642 | 7.025  | 1.00 | 25.87 |
| ATOM | 2572 | O   | VAL | 1751 | 17.178 | -16.218 | 8.106  | 1.00 | 23.41 |
| ATOM | 2573 | N   | GLU | 1752 | 17.253 | -16.243 | 5.858  | 1.00 | 29.98 |
| ATOM | 2575 | CA  | GLU | 1752 | 17.631 | -17.651 | 5.799  | 1.00 | 33.12 |
| ATOM | 2576 | CB  | GLU | 1752 | 17.653 | -18.134 | 4.346  | 1.00 | 35.99 |
| ATOM | 2577 | CG  | GLU | 1752 | 16.284 | -18.077 | 3.670  | 1.00 | 43.58 |
| ATOM | 2578 | CD  | GLU | 1752 | 16.300 | -18.575 | 2.230  | 1.00 | 48.64 |
| ATOM | 2579 | OE1 | GLU | 1752 | 15.453 | -18.124 | 1.431  | 1.00 | 48.99 |
| ATOM | 2580 | OE2 | GLU | 1752 | 17.157 | -19.426 | 1.902  | 1.00 | 55.41 |
| ATOM | 2581 | C   | GLU | 1752 | 18.995 | -17.891 | 6.467  | 1.00 | 33.15 |
| ATOM | 2582 | O   | GLU | 1752 | 19.173 | -18.847 | 7.236  | 1.00 | 30.71 |
| ATOM | 2583 | N   | ASP | 1753 | 19.951 | -17.011 | 6.186  | 1.00 | 31.12 |
| ATOM | 2585 | CA  | ASP | 1753 | 21.279 | -17.131 | 6.770  | 1.00 | 30.51 |
| ATOM | 2586 | CB  | ASP | 1753 | 22.243 | -16.108 | 6.155  | 1.00 | 29.15 |
| ATOM | 2587 | CG  | ASP | 1753 | 22.488 | -16.344 | 4.672  | 1.00 | 33.53 |
| ATOM | 2588 | OD1 | ASP | 1753 | 22.361 | -17.494 | 4.215  | 1.00 | 34.92 |
| ATOM | 2589 | OD2 | ASP | 1753 | 22.815 | -15.371 | 3.955  | 1.00 | 38.26 |
| ATOM | 2590 | C   | ASP | 1753 | 21.215 | -16.968 | 8.287  | 1.00 | 28.54 |
| ATOM | 2591 | O   | ASP | 1753 | 21.739 | -17.800 | 9.025  | 1.00 | 28.95 |
| ATOM | 2592 | N   | LEU | 1754 | 20.537 | -15.926 | 8.753  | 1.00 | 27.25 |
| ATOM | 2594 | CA  | LEU | 1754 | 20.421 | -15.673 | 10.193 | 1.00 | 28.08 |
| ATOM | 2595 | CB  | LEU | 1754 | 19.754 | -14.328 | 10.455 | 1.00 | 23.31 |
| ATOM | 2596 | CG  | LEU | 1754 | 20.733 | -13.199 | 10.160 | 1.00 | 24.47 |
| ATOM | 2597 | CD1 | LEU | 1754 | 20.007 | -11.863 | 10.094 | 1.00 | 19.58 |
| ATOM | 2598 | CD2 | LEU | 1754 | 21.846 | -13.207 | 11.216 | 1.00 | 21.17 |
| ATOM | 2599 | C   | LEU | 1754 | 19.688 | -16.789 | 10.921 | 1.00 | 31.61 |
| ATOM | 2600 | O   | LEU | 1754 | 20.037 | -17.135 | 12.048 | 1.00 | 32.64 |
| ATOM | 2601 | N   | ASP | 1755 | 18.690 | -17.367 | 10.259 | 1.00 | 32.61 |
| ATOM | 2603 | CA  | ASP | 1755 | 17.931 | -18.460 | 10.833 | 1.00 | 34.20 |
| ATOM | 2604 | CB  | ASP | 1755 | 16.823 | -18.883 | 9.872  | 1.00 | 37.70 |
| ATOM | 2605 | CG  | ASP | 1755 | 15.808 | -19.780 | 10.526 | 1.00 | 44.27 |
| ATOM | 2606 | OD1 | ASP | 1755 | 15.445 | -19.521 | 11.692 | 1.00 | 47.16 |
| ATOM | 2607 | OD2 | ASP | 1755 | 15.370 | -20.745 | 9.876  | 1.00 | 51.35 |
| ATOM | 2608 | C   | ASP | 1755 | 18.894 | -19.616 | 11.073 | 1.00 | 34.63 |
| ATOM | 2609 | O   | ASP | 1755 | 18.858 | -20.273 | 12.119 | 1.00 | 36.24 |
| ATOM | 2610 | N   | ARG | 1756 | 19.782 | -19.826 | 10.108 | 1.00 | 32.60 |
| ATOM | 2612 | CA  | ARG | 1756 | 20.784 | -20.870 | 10.190 | 1.00 | 33.69 |
| ATOM | 2613 | CB  | ARG | 1756 | 21.548 | -20.939 | 8.867  | 1.00 | 35.42 |
| ATOM | 2614 | CG  | ARG | 1756 | 22.639 | -22.003 | 8.800  | 1.00 | 40.87 |
| ATOM | 2615 | CD  | ARG | 1756 | 23.212 | -22.094 | 7.395  | 1.00 | 42.73 |
| ATOM | 2616 | NE  | ARG | 1756 | 23.739 | -20.813 | 6.926  | 1.00 | 48.45 |
| ATOM | 2618 | CZ  | ARG | 1756 | 24.882 | -20.274 | 7.340  | 1.00 | 49.90 |
| ATOM | 2619 | NH1 | ARG | 1756 | 25.634 | -20.905 | 8.243  | 1.00 | 49.63 |
| ATOM | 2622 | NH2 | ARG | 1756 | 25.276 | -19.105 | 6.844  | 1.00 | 50.86 |
| ATOM | 2625 | C   | ARG | 1756 | 21.748 | -20.598 | 11.345 | 1.00 | 34.78 |
| ATOM | 2626 | O   | ARG | 1756 | 21.929 | -21.436 | 12.228 | 1.00 | 36.24 |
| ATOM | 2627 | N   | ILE | 1757 | 22.325 | -19.402 | 11.363 | 1.00 | 35.35 |
| ATOM | 2629 | CA  | ILE | 1757 | 23.281 | -19.018 | 12.392 | 1.00 | 35.54 |
| ATOM | 2630 | CB  | ILE | 1757 | 23.905 | -17.631 | 12.103 | 1.00 | 34.99 |
| ATOM | 2631 | CG2 | ILE | 1757 | 24.955 | -17.303 | 13.159 | 1.00 | 32.06 |
| ATOM | 2632 | CG1 | ILE | 1757 | 24.547 | -17.626 | 10.711 | 1.00 | 33.77 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2633 | CD1 | ILE | 1757 | 24.908 | -16.247 | 10.185 | 1.00 | 31.44 |
| ATOM | 2634 | C   | ILE | 1757 | 22.698 | -19.036 | 13.803 | 1.00 | 36.49 |
| ATOM | 2635 | O   | ILE | 1757 | 23.337 | -19.548 | 14.716 | 1.00 | 36.40 |
| ATOM | 2636 | N   | VAL | 1758 | 21.487 | -18.515 | 13.988 | 1.00 | 36.91 |
| ATOM | 2638 | CA  | VAL | 1758 | 20.881 | -18.498 | 15.322 | 1.00 | 38.68 |
| ATOM | 2639 | CB  | VAL | 1758 | 19.425 | -17.962 | 15.312 | 1.00 | 37.77 |
| ATOM | 2640 | CG1 | VAL | 1758 | 18.806 | -18.059 | 16.708 | 1.00 | 38.39 |
| ATOM | 2641 | CG2 | VAL | 1758 | 19.392 | -16.524 | 14.854 | 1.00 | 36.69 |
| ATOM | 2642 | C   | VAL | 1758 | 20.891 | -19.908 | 15.895 | 1.00 | 41.38 |
| ATOM | 2643 | O   | VAL | 1758 | 21.405 | -20.138 | 16.997 | 1.00 | 42.41 |
| ATOM | 2644 | N   | ALA | 1759 | 20.379 | -20.851 | 15.111 | 1.00 | 40.59 |
| ATOM | 2646 | CA  | ALA | 1759 | 20.325 | -22.247 | 15.508 | 1.00 | 40.84 |
| ATOM | 2647 | CB  | ALA | 1759 | 19.741 | -23.074 | 14.384 | 1.00 | 40.20 |
| ATOM | 2648 | C   | ALA | 1759 | 21.703 | -22.787 | 15.897 | 1.00 | 42.52 |
| ATOM | 2649 | O   | ALA | 1759 | 21.822 | -23.594 | 16.809 | 1.00 | 44.78 |
| ATOM | 2650 | N   | LEU | 1760 | 22.740 | -22.339 | 15.208 | 1.00 | 43.16 |
| ATOM | 2652 | CA  | LEU | 1760 | 24.095 | -22.800 | 15.493 | 1.00 | 46.98 |
| ATOM | 2653 | CB  | LEU | 1760 | 24.921 | -22.761 | 14.203 | 1.00 | 47.66 |
| ATOM | 2654 | CG  | LEU | 1760 | 24.286 | -23.545 | 13.060 | 1.00 | 52.77 |
| ATOM | 2655 | CD1 | LEU | 1760 | 24.973 | -23.222 | 11.745 | 1.00 | 56.58 |
| ATOM | 2656 | CD2 | LEU | 1760 | 24.343 | -25.038 | 13.369 | 1.00 | 53.06 |
| ATOM | 2657 | C   | LEU | 1760 | 24.811 | -21.986 | 16.573 | 1.00 | 47.43 |
| ATOM | 2658 | O   | LEU | 1760 | 25.917 | -22.335 | 16.989 | 1.00 | 46.58 |
| ATOM | 2659 | N   | THR | 1761 | 24.183 | -20.914 | 17.034 | 1.00 | 48.65 |
| ATOM | 2661 | CA  | THR | 1761 | 24.814 | -20.055 | 18.021 | 1.00 | 49.69 |
| ATOM | 2662 | CB  | THR | 1761 | 24.382 | -18.570 | 17.831 | 1.00 | 50.15 |
| ATOM | 2663 | OG1 | THR | 1761 | 24.783 | -18.127 | 16.529 | 1.00 | 49.87 |
| ATOM | 2665 | CG2 | THR | 1761 | 25.063 | -17.671 | 18.843 | 1.00 | 48.64 |
| ATOM | 2666 | C   | THR | 1761 | 24.673 | -20.497 | 19.475 | 1.00 | 50.33 |
| ATOM | 2667 | O   | THR | 1761 | 23.584 | -20.825 | 19.947 | 1.00 | 48.81 |
| ATOM | 2668 | N   | SER | 1762 | 25.811 | -20.511 | 20.166 | 1.00 | 50.25 |
| ATOM | 2670 | CA  | SER | 1762 | 25.891 | -20.890 | 21.566 | 1.00 | 50.98 |
| ATOM | 2671 | CB  | SER | 1762 | 27.362 | -20.887 | 22.002 | 1.00 | 54.71 |
| ATOM | 2672 | OG  | SER | 1762 | 27.537 | -21.423 | 23.308 | 1.00 | 57.99 |
| ATOM | 2674 | C   | SER | 1762 | 25.083 | -19.914 | 22.425 | 1.00 | 49.39 |
| ATOM | 2675 | O   | SER | 1762 | 25.297 | -18.694 | 22.370 | 1.00 | 48.00 |
| ATOM | 3474 | N   | SER | 461  | 79.623 | 25.766  | 14.533 | 1.00 | 48.84 |
| ATOM | 3476 | CA  | SER | 461  | 79.566 | 24.645  | 13.593 | 1.00 | 46.93 |
| ATOM | 3477 | CB  | SER | 461  | 78.276 | 23.838  | 13.809 | 1.00 | 46.66 |
| ATOM | 3478 | C   | SER | 461  | 79.676 | 25.114  | 12.138 | 1.00 | 43.02 |
| ATOM | 3479 | O   | SER | 461  | 79.692 | 24.301  | 11.210 | 1.00 | 40.19 |
| ATOM | 3480 | N   | GLU | 462  | 79.791 | 26.427  | 11.956 | 1.00 | 41.48 |
| ATOM | 3482 | CA  | GLU | 462  | 79.904 | 27.034  | 10.628 | 1.00 | 39.59 |
| ATOM | 3483 | CB  | GLU | 462  | 80.021 | 28.560  | 10.744 | 1.00 | 40.66 |
| ATOM | 3484 | C   | GLU | 462  | 81.054 | 26.480  | 9.796  | 1.00 | 36.60 |
| ATOM | 3485 | O   | GLU | 462  | 80.852 | 26.121  | 8.641  | 1.00 | 35.10 |
| ATOM | 3486 | N   | TYR | 463  | 82.252 | 26.416  | 10.380 | 1.00 | 36.07 |
| ATOM | 3488 | CA  | TYR | 463  | 83.430 | 25.916  | 9.673  | 1.00 | 35.60 |
| ATOM | 3489 | CB  | TYR | 463  | 84.597 | 26.906  | 9.755  | 1.00 | 38.15 |
| ATOM | 3490 | CG  | TYR | 463  | 84.372 | 28.104  | 8.861  | 1.00 | 44.08 |
| ATOM | 3491 | CD1 | TYR | 463  | 84.137 | 29.368  | 9.406  | 1.00 | 44.99 |
| ATOM | 3492 | CE1 | TYR | 463  | 83.833 | 30.451  | 8.593  | 1.00 | 46.88 |
| ATOM | 3493 | CD2 | TYR | 463  | 84.305 | 27.959  | 7.464  | 1.00 | 43.95 |
| ATOM | 3494 | CE2 | TYR | 463  | 84.003 | 29.044  | 6.642  | 1.00 | 41.86 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3495 | CZ  | TYR | 463 | 83.768 | 30.282 | 7.215  | 1.00 | 43.89 |
| ATOM | 3496 | OH  | TYR | 463 | 83.468 | 31.364 | 6.431  | 1.00 | 44.37 |
| ATOM | 3498 | C   | TYR | 463 | 83.903 | 24.520 | 10.014 | 1.00 | 33.90 |
| ATOM | 3499 | O   | TYR | 463 | 84.440 | 23.828 | 9.147  | 1.00 | 33.90 |
| ATOM | 3500 | N   | GLU | 464 | 83.742 | 24.098 | 11.260 | 1.00 | 32.81 |
| ATOM | 3502 | CA  | GLU | 464 | 84.167 | 22.753 | 11.633 | 1.00 | 34.64 |
| ATOM | 3503 | CB  | GLU | 464 | 85.663 | 22.727 | 11.919 | 1.00 | 37.48 |
| ATOM | 3504 | CG  | GLU | 464 | 86.075 | 23.633 | 13.049 | 1.00 | 45.48 |
| ATOM | 3505 | CD  | GLU | 464 | 87.552 | 23.987 | 13.015 | 1.00 | 55.80 |
| ATOM | 3506 | OE1 | GLU | 464 | 87.920 | 24.996 | 13.659 | 1.00 | 61.78 |
| ATOM | 3507 | OE2 | GLU | 464 | 88.344 | 23.271 | 12.351 | 1.00 | 58.34 |
| ATOM | 3508 | C   | GLU | 464 | 83.426 | 22.296 | 12.858 | 1.00 | 33.05 |
| ATOM | 3509 | O   | GLU | 464 | 83.083 | 23.119 | 13.705 | 1.00 | 34.54 |
| ATOM | 3510 | N   | LEU | 465 | 83.147 | 21.001 | 12.943 | 1.00 | 32.59 |
| ATOM | 3512 | CA  | LEU | 465 | 82.462 | 20.463 | 14.114 | 1.00 | 33.74 |
| ATOM | 3513 | CB  | LEU | 465 | 81.484 | 19.341 | 13.747 | 1.00 | 31.20 |
| ATOM | 3514 | CG  | LEU | 465 | 80.510 | 19.433 | 12.577 | 1.00 | 32.77 |
| ATOM | 3515 | CD1 | LEU | 465 | 79.355 | 18.492 | 12.858 | 1.00 | 26.22 |
| ATOM | 3516 | CD2 | LEU | 465 | 80.021 | 20.846 | 12.359 | 1.00 | 31.59 |
| ATOM | 3517 | C   | LEU | 465 | 83.511 | 19.889 | 15.059 | 1.00 | 35.64 |
| ATOM | 3518 | O   | LEU | 465 | 84.641 | 19.574 | 14.642 | 1.00 | 33.77 |
| ATOM | 3519 | N   | PRO | 466 | 83.150 | 19.734 | 16.349 | 1.00 | 36.71 |
| ATOM | 3520 | CD  | PRO | 466 | 81.865 | 20.104 | 16.967 | 1.00 | 36.97 |
| ATOM | 3521 | CA  | PRO | 466 | 84.074 | 19.185 | 17.346 | 1.00 | 36.17 |
| ATOM | 3522 | CB  | PRO | 466 | 83.247 | 19.196 | 18.626 | 1.00 | 36.83 |
| ATOM | 3523 | CG  | PRO | 466 | 82.274 | 20.326 | 18.394 | 1.00 | 40.80 |
| ATOM | 3524 | C   | PRO | 466 | 84.419 | 17.765 | 16.950 | 1.00 | 37.39 |
| ATOM | 3525 | O   | PRO | 466 | 83.626 | 17.077 | 16.297 | 1.00 | 34.71 |
| ATOM | 3526 | N   | GLU | 467 | 85.611 | 17.330 | 17.315 | 1.00 | 38.40 |
| ATOM | 3528 | CA  | GLU | 467 | 86.030 | 15.987 | 16.976 | 1.00 | 42.59 |
| ATOM | 3529 | CB  | GLU | 467 | 87.493 | 15.987 | 16.540 | 1.00 | 49.21 |
| ATOM | 3530 | CG  | GLU | 467 | 87.922 | 14.682 | 15.891 | 1.00 | 58.93 |
| ATOM | 3531 | CD  | GLU | 467 | 89.276 | 14.769 | 15.213 | 1.00 | 64.76 |
| ATOM | 3532 | OE1 | GLU | 467 | 90.013 | 15.767 | 15.426 | 1.00 | 63.57 |
| ATOM | 3533 | OE2 | GLU | 467 | 89.592 | 13.823 | 14.458 | 1.00 | 69.03 |
| ATOM | 3534 | C   | GLU | 467 | 85.825 | 15.037 | 18.146 | 1.00 | 40.74 |
| ATOM | 3535 | O   | GLU | 467 | 85.938 | 15.430 | 19.309 | 1.00 | 41.52 |
| ATOM | 3536 | N   | ASP | 468 | 85.472 | 13.802 | 17.831 | 1.00 | 38.57 |
| ATOM | 3538 | CA  | ASP | 468 | 85.273 | 12.776 | 18.851 | 1.00 | 40.86 |
| ATOM | 3539 | CB  | ASP | 468 | 83.793 | 12.640 | 19.224 | 1.00 | 40.27 |
| ATOM | 3540 | CG  | ASP | 468 | 83.566 | 11.697 | 20.397 | 1.00 | 41.36 |
| ATOM | 3541 | OD1 | ASP | 468 | 82.429 | 11.670 | 20.919 | 1.00 | 42.50 |
| ATOM | 3542 | OD2 | ASP | 468 | 84.514 | 10.992 | 20.807 | 1.00 | 38.55 |
| ATOM | 3543 | C   | ASP | 468 | 85.803 | 11.470 | 18.278 | 1.00 | 40.75 |
| ATOM | 3544 | O   | ASP | 468 | 85.068 | 10.701 | 17.650 | 1.00 | 41.80 |
| ATOM | 3545 | N   | PRO | 469 | 87.100 | 11.209 | 18.481 | 1.00 | 41.71 |
| ATOM | 3546 | CD  | PRO | 469 | 88.001 | 12.062 | 19.276 | 1.00 | 41.87 |
| ATOM | 3547 | CA  | PRO | 469 | 87.801 | 10.011 | 18.012 | 1.00 | 40.07 |
| ATOM | 3548 | CB  | PRO | 469 | 89.091 | 10.042 | 18.831 | 1.00 | 40.42 |
| ATOM | 3549 | CG  | PRO | 469 | 89.366 | 11.505 | 18.938 | 1.00 | 39.42 |
| ATOM | 3550 | C   | PRO | 469 | 87.033 | 8.720  | 18.260 | 1.00 | 41.00 |
| ATOM | 3551 | O   | PRO | 469 | 87.032 | 7.822  | 17.414 | 1.00 | 41.75 |
| ATOM | 3552 | N   | ARG | 470 | 86.361 | 8.639  | 19.411 | 1.00 | 40.70 |
| ATOM | 3554 | CA  | ARG | 470 | 85.600 | 7.446  | 19.779 | 1.00 | 41.03 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3555 | CB  | ARG | 470 | 84.827 | 7.677  | 21.075 | 1.00 | 44.18 |
| ATOM | 3556 | CG  | ARG | 470 | 85.628 | 8.240  | 22.218 | 1.00 | 47.89 |
| ATOM | 3557 | CD  | ARG | 470 | 84.719 | 8.518  | 23.400 | 1.00 | 50.56 |
| ATOM | 3558 | NE  | ARG | 470 | 83.576 | 9.345  | 23.023 | 1.00 | 51.20 |
| ATOM | 3560 | CZ  | ARG | 470 | 82.695 | 9.845  | 23.881 | 1.00 | 52.24 |
| ATOM | 3561 | NH1 | ARG | 470 | 82.818 | 9.608  | 25.183 | 1.00 | 51.31 |
| ATOM | 3564 | NH2 | ARG | 470 | 81.672 | 10.564 | 23.432 | 1.00 | 52.73 |
| ATOM | 3567 | C   | ARG | 470 | 84.596 | 7.004  | 18.723 | 1.00 | 39.03 |
| ATOM | 3568 | O   | ARG | 470 | 84.401 | 5.813  | 18.518 | 1.00 | 40.72 |
| ATOM | 3569 | N   | TRP | 471 | 83.972 | 7.965  | 18.050 | 1.00 | 37.77 |
| ATOM | 3571 | CA  | TRP | 471 | 82.948 | 7.656  | 17.059 | 1.00 | 36.73 |
| ATOM | 3572 | CB  | TRP | 471 | 81.672 | 8.401  | 17.432 | 1.00 | 35.05 |
| ATOM | 3573 | CG  | TRP | 471 | 81.044 | 7.862  | 18.673 | 1.00 | 34.85 |
| ATOM | 3574 | CD2 | TRP | 471 | 80.235 | 6.687  | 18.766 | 1.00 | 34.96 |
| ATOM | 3575 | CE2 | TRP | 471 | 79.831 | 6.564  | 20.116 | 1.00 | 35.12 |
| ATOM | 3576 | CE3 | TRP | 471 | 79.810 | 5.721  | 17.838 | 1.00 | 33.25 |
| ATOM | 3577 | CD1 | TRP | 471 | 81.106 | 8.390  | 19.933 | 1.00 | 29.97 |
| ATOM | 3578 | NE1 | TRP | 471 | 80.377 | 7.616  | 20.805 | 1.00 | 32.18 |
| ATOM | 3580 | CZ2 | TRP | 471 | 79.017 | 5.512  | 20.560 | 1.00 | 33.98 |
| ATOM | 3581 | CZ3 | TRP | 471 | 79.002 | 4.673  | 18.282 | 1.00 | 33.71 |
| ATOM | 3582 | CH2 | TRP | 471 | 78.618 | 4.580  | 19.632 | 1.00 | 33.28 |
| ATOM | 3583 | C   | TRP | 471 | 83.275 | 7.930  | 15.599 | 1.00 | 37.27 |
| ATOM | 3584 | O   | TRP | 471 | 82.580 | 7.445  | 14.695 | 1.00 | 36.61 |
| ATOM | 3585 | N   | GLU | 472 | 84.341 | 8.680  | 15.361 | 1.00 | 37.93 |
| ATOM | 3587 | CA  | GLU | 472 | 84.706 | 9.054  | 14.004 | 1.00 | 37.08 |
| ATOM | 3588 | CB  | GLU | 472 | 85.865 | 10.049 | 14.045 | 1.00 | 36.30 |
| ATOM | 3589 | CG  | GLU | 472 | 86.026 | 10.851 | 12.773 | 1.00 | 33.51 |
| ATOM | 3590 | CD  | GLU | 472 | 84.931 | 11.895 | 12.580 | 1.00 | 33.80 |
| ATOM | 3591 | OE1 | GLU | 472 | 84.385 | 12.408 | 13.581 | 1.00 | 35.19 |
| ATOM | 3592 | OE2 | GLU | 472 | 84.641 | 12.226 | 11.412 | 1.00 | 32.51 |
| ATOM | 3593 | C   | GLU | 472 | 85.021 | 7.923  | 13.032 | 1.00 | 37.88 |
| ATOM | 3594 | O   | GLU | 472 | 85.774 | 7.000  | 13.351 | 1.00 | 38.20 |
| ATOM | 3595 | N   | LEU | 473 | 84.422 | 7.992  | 11.846 | 1.00 | 37.55 |
| ATOM | 3597 | CA  | LEU | 473 | 84.678 | 7.004  | 10.813 | 1.00 | 36.93 |
| ATOM | 3598 | CB  | LEU | 473 | 83.404 | 6.244  | 10.443 | 1.00 | 37.08 |
| ATOM | 3599 | CG  | LEU | 473 | 83.680 | 5.086  | 9.470  | 1.00 | 39.14 |
| ATOM | 3600 | CD1 | LEU | 473 | 84.196 | 3.877  | 10.250 | 1.00 | 38.39 |
| ATOM | 3601 | CD2 | LEU | 473 | 82.433 | 4.716  | 8.672  | 1.00 | 39.46 |
| ATOM | 3602 | C   | LEU | 473 | 85.207 | 7.732  | 9.577  | 1.00 | 38.52 |
| ATOM | 3603 | O   | LEU | 473 | 84.660 | 8.764  | 9.182  | 1.00 | 38.67 |
| ATOM | 3604 | N   | PRO | 474 | 86.334 | 7.259  | 9.005  | 1.00 | 39.02 |
| ATOM | 3605 | CD  | PRO | 474 | 87.259 | 6.259  | 9.571  | 1.00 | 38.39 |
| ATOM | 3606 | CA  | PRO | 474 | 86.918 | 7.877  | 7.809  | 1.00 | 38.24 |
| ATOM | 3607 | CB  | PRO | 474 | 88.188 | 7.049  | 7.590  | 1.00 | 38.40 |
| ATOM | 3608 | CG  | PRO | 474 | 88.580 | 6.680  | 8.979  | 1.00 | 35.50 |
| ATOM | 3609 | C   | PRO | 474 | 85.942 | 7.727  | 6.642  | 1.00 | 37.56 |
| ATOM | 3610 | O   | PRO | 474 | 85.415 | 6.641  | 6.400  | 1.00 | 37.88 |
| ATOM | 3611 | N   | ARG | 475 | 85.720 | 8.809  | 5.907  | 1.00 | 37.73 |
| ATOM | 3613 | CA  | ARG | 475 | 84.779 | 8.790  | 4.795  | 1.00 | 40.01 |
| ATOM | 3614 | CB  | ARG | 475 | 84.655 | 10.183 | 4.182  | 1.00 | 38.31 |
| ATOM | 3615 | CG  | ARG | 475 | 84.217 | 11.236 | 5.198  | 1.00 | 35.15 |
| ATOM | 3616 | CD  | ARG | 475 | 84.069 | 12.631 | 4.586  | 1.00 | 33.92 |
| ATOM | 3617 | NE  | ARG | 475 | 83.718 | 13.603 | 5.616  | 1.00 | 30.45 |
| ATOM | 3619 | CZ  | ARG | 475 | 82.475 | 13.880 | 5.993  | 1.00 | 26.48 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3620 | NH1 | ARG | 475 | 81.444 | 13.284 | 5.407  | 1.00 | 24.80 |
| ATOM | 3623 | NH2 | ARG | 475 | 82.271 | 14.650 | 7.056  | 1.00 | 25.16 |
| ATOM | 3626 | C   | ARG | 475 | 85.054 | 7.735  | 3.728  | 1.00 | 42.18 |
| ATOM | 3627 | O   | ARG | 475 | 84.125 | 7.197  | 3.128  | 1.00 | 41.43 |
| ATOM | 3628 | N   | ASP | 476 | 86.322 | 7.391  | 3.535  | 1.00 | 45.44 |
| ATOM | 3630 | CA  | ASP | 476 | 86.676 | 6.387  | 2.541  | 1.00 | 49.80 |
| ATOM | 3631 | CB  | ASP | 476 | 88.192 | 6.343  | 2.329  | 1.00 | 50.95 |
| ATOM | 3632 | CG  | ASP | 476 | 88.944 | 5.975  | 3.585  | 1.00 | 53.89 |
| ATOM | 3633 | OD1 | ASP | 476 | 89.303 | 4.789  | 3.731  | 1.00 | 59.71 |
| ATOM | 3634 | OD2 | ASP | 476 | 89.176 | 6.867  | 4.427  | 1.00 | 57.39 |
| ATOM | 3635 | C   | ASP | 476 | 86.149 | 5.010  | 2.950  | 1.00 | 51.23 |
| ATOM | 3636 | O   | ASP | 476 | 86.051 | 4.102  | 2.121  | 1.00 | 53.54 |
| ATOM | 3637 | N   | ARG | 477 | 85.814 | 4.864  | 4.230  | 1.00 | 50.49 |
| ATOM | 3639 | CA  | ARG | 477 | 85.285 | 3.610  | 4.753  | 1.00 | 49.32 |
| ATOM | 3640 | CB  | ARG | 477 | 85.834 | 3.364  | 6.152  | 1.00 | 49.79 |
| ATOM | 3641 | CG  | ARG | 477 | 87.237 | 2.806  | 6.112  | 1.00 | 53.06 |
| ATOM | 3642 | CD  | ARG | 477 | 87.960 | 2.981  | 7.420  | 1.00 | 56.76 |
| ATOM | 3643 | NE  | ARG | 477 | 87.310 | 2.293  | 8.529  | 1.00 | 59.35 |
| ATOM | 3645 | CZ  | ARG | 477 | 87.728 | 2.371  | 9.789  | 1.00 | 62.23 |
| ATOM | 3646 | NH1 | ARG | 477 | 88.793 | 3.103  | 10.101 | 1.00 | 63.66 |
| ATOM | 3649 | NH2 | ARG | 477 | 87.067 | 1.741  | 10.745 | 1.00 | 64.35 |
| ATOM | 3652 | C   | ARG | 477 | 83.755 | 3.547  | 4.750  | 1.00 | 48.04 |
| ATOM | 3653 | O   | ARG | 477 | 83.160 | 2.693  | 5.404  | 1.00 | 48.09 |
| ATOM | 3654 | N   | LEU | 478 | 83.129 | 4.412  | 3.958  | 1.00 | 45.38 |
| ATOM | 3656 | CA  | LEU | 478 | 81.685 | 4.469  | 3.870  | 1.00 | 41.60 |
| ATOM | 3657 | CB  | LEU | 478 | 81.168 | 5.578  | 4.790  | 1.00 | 38.39 |
| ATOM | 3658 | CG  | LEU | 478 | 79.651 | 5.699  | 4.894  | 1.00 | 36.38 |
| ATOM | 3659 | CD1 | LEU | 478 | 79.113 | 4.595  | 5.802  | 1.00 | 33.98 |
| ATOM | 3660 | CD2 | LEU | 478 | 79.293 | 7.068  | 5.441  | 1.00 | 40.06 |
| ATOM | 3661 | C   | LEU | 478 | 81.279 | 4.774  | 2.433  | 1.00 | 41.92 |
| ATOM | 3662 | O   | LEU | 478 | 81.696 | 5.780  | 1.870  | 1.00 | 43.99 |
| ATOM | 3663 | N   | VAL | 479 | 80.466 | 3.904  | 1.844  | 1.00 | 42.29 |
| ATOM | 3665 | CA  | VAL | 479 | 79.992 | 4.082  | 0.471  | 1.00 | 41.07 |
| ATOM | 3666 | CB  | VAL | 479 | 80.227 | 2.816  | -0.397 | 1.00 | 41.13 |
| ATOM | 3667 | CG1 | VAL | 479 | 79.719 | 3.057  | -1.810 | 1.00 | 40.19 |
| ATOM | 3668 | CG2 | VAL | 479 | 81.700 | 2.448  | -0.420 | 1.00 | 41.36 |
| ATOM | 3669 | C   | VAL | 479 | 78.500 | 4.345  | 0.540  | 1.00 | 40.44 |
| ATOM | 3670 | O   | VAL | 479 | 77.719 | 3.451  | 0.885  | 1.00 | 39.86 |
| ATOM | 3671 | N   | LEU | 480 | 78.112 | 5.582  | 0.253  | 1.00 | 41.37 |
| ATOM | 3673 | CA  | LEU | 480 | 76.706 | 5.973  | 0.293  | 1.00 | 41.63 |
| ATOM | 3674 | CB  | LEU | 480 | 76.568 | 7.492  | 0.166  | 1.00 | 39.91 |
| ATOM | 3675 | CG  | LEU | 480 | 77.236 | 8.332  | 1.261  | 1.00 | 39.23 |
| ATOM | 3676 | CD1 | LEU | 480 | 76.890 | 9.800  | 1.039  | 1.00 | 37.73 |
| ATOM | 3677 | CD2 | LEU | 480 | 76.791 | 7.877  | 2.647  | 1.00 | 35.18 |
| ATOM | 3678 | C   | LEU | 480 | 75.899 | 5.273  | -0.788 | 1.00 | 42.21 |
| ATOM | 3679 | O   | LEU | 480 | 76.395 | 5.048  | -1.890 | 1.00 | 45.27 |
| ATOM | 3680 | N   | GLY | 481 | 74.650 | 4.947  | -0.476 | 1.00 | 41.51 |
| ATOM | 3682 | CA  | GLY | 481 | 73.812 | 4.257  | -1.433 | 1.00 | 40.19 |
| ATOM | 3683 | C   | GLY | 481 | 72.446 | 4.872  | -1.640 | 1.00 | 41.58 |
| ATOM | 3684 | O   | GLY | 481 | 72.262 | 6.091  | -1.550 | 1.00 | 41.35 |
| ATOM | 3685 | N   | LYS | 482 | 71.474 | 4.009  | -1.908 | 1.00 | 42.65 |
| ATOM | 3687 | CA  | LYS | 482 | 70.105 | 4.429  | -2.166 | 1.00 | 44.17 |
| ATOM | 3688 | CB  | LYS | 482 | 69.240 | 3.221  | -2.542 | 1.00 | 45.66 |
| ATOM | 3689 | C   | LYS | 482 | 69.475 | 5.148  | -0.994 | 1.00 | 44.86 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3690 | O   | LYS | 482 | 69.638 | 4.752  | 0.155  | 1.00 | 45.23 |
| ATOM | 3691 | N   | PRO | 483 | 68.749 | 6.234  | -1.273 | 1.00 | 45.94 |
| ATOM | 3692 | CD  | PRO | 483 | 68.518 | 6.880  | -2.576 | 1.00 | 46.96 |
| ATOM | 3693 | CA  | PRO | 483 | 68.099 | 6.983  | -0.206 | 1.00 | 47.79 |
| ATOM | 3694 | CB  | PRO | 483 | 67.542 | 8.200  | -0.947 | 1.00 | 47.02 |
| ATOM | 3695 | CG  | PRO | 483 | 67.269 | 7.666  | -2.307 | 1.00 | 46.65 |
| ATOM | 3696 | C   | PRO | 483 | 66.991 | 6.151  | 0.429  | 1.00 | 48.74 |
| ATOM | 3697 | O   | PRO | 483 | 66.314 | 5.376  | -0.251 | 1.00 | 48.01 |
| ATOM | 3698 | N   | LEU | 484 | 66.858 | 6.268  | 1.742  | 1.00 | 49.91 |
| ATOM | 3700 | CA  | LEU | 484 | 65.837 | 5.547  | 2.477  | 1.00 | 53.93 |
| ATOM | 3701 | CB  | LEU | 484 | 66.433 | 4.883  | 3.720  | 1.00 | 50.17 |
| ATOM | 3702 | CG  | LEU | 484 | 67.517 | 3.844  | 3.445  | 1.00 | 48.93 |
| ATOM | 3703 | CD1 | LEU | 484 | 68.226 | 3.460  | 4.731  | 1.00 | 49.05 |
| ATOM | 3704 | CD2 | LEU | 484 | 66.906 | 2.630  | 2.784  | 1.00 | 47.03 |
| ATOM | 3705 | C   | LEU | 484 | 64.715 | 6.501  | 2.878  | 1.00 | 58.70 |
| ATOM | 3706 | O   | LEU | 484 | 63.571 | 6.075  | 3.055  | 1.00 | 61.95 |
| ATOM | 3707 | N   | GLY | 485 | 65.027 | 7.788  | 3.006  | 1.00 | 60.35 |
| ATOM | 3709 | CA  | GLY | 485 | 63.998 | 8.737  | 3.397  | 1.00 | 64.00 |
| ATOM | 3710 | C   | GLY | 485 | 64.445 | 10.183 | 3.476  | 1.00 | 66.09 |
| ATOM | 3711 | O   | GLY | 485 | 65.643 | 10.468 | 3.577  | 1.00 | 65.26 |
| ATOM | 3712 | N   | GLU | 486 | 63.471 | 11.090 | 3.458  | 1.00 | 67.18 |
| ATOM | 3714 | CA  | GLU | 486 | 63.733 | 12.525 | 3.508  | 1.00 | 68.69 |
| ATOM | 3715 | CB  | GLU | 486 | 63.873 | 13.084 | 2.091  | 1.00 | 69.88 |
| ATOM | 3716 | C   | GLU | 486 | 62.618 | 13.249 | 4.245  | 1.00 | 68.80 |
| ATOM | 3717 | O   | GLU | 486 | 61.481 | 12.775 | 4.295  | 1.00 | 69.26 |
| ATOM | 3718 | N   | GLY | 487 | 62.943 | 14.415 | 4.791  | 1.00 | 68.47 |
| ATOM | 3720 | CA  | GLY | 487 | 61.960 | 15.188 | 5.520  | 1.00 | 67.56 |
| ATOM | 3721 | C   | GLY | 487 | 62.373 | 16.635 | 5.634  | 1.00 | 66.71 |
| ATOM | 3722 | O   | GLY | 487 | 63.040 | 17.172 | 4.747  | 1.00 | 66.48 |
| ATOM | 3723 | N   | ALA | 488 | 61.979 | 17.265 | 6.735  | 1.00 | 67.22 |
| ATOM | 3725 | CA  | ALA | 488 | 62.304 | 18.661 | 6.992  | 1.00 | 67.78 |
| ATOM | 3726 | CB  | ALA | 488 | 61.637 | 19.121 | 8.283  | 1.00 | 68.97 |
| ATOM | 3727 | C   | ALA | 488 | 63.817 | 18.830 | 7.085  | 1.00 | 67.38 |
| ATOM | 3728 | O   | ALA | 488 | 64.413 | 18.597 | 8.141  | 1.00 | 67.14 |
| ATOM | 3729 | N   | PHE | 489 | 64.429 | 19.155 | 5.946  | 1.00 | 66.22 |
| ATOM | 3731 | CA  | PHE | 489 | 65.877 | 19.364 | 5.831  | 1.00 | 65.49 |
| ATOM | 3732 | CB  | PHE | 489 | 66.277 | 20.699 | 6.467  | 1.00 | 66.11 |
| ATOM | 3733 | C   | PHE | 489 | 66.749 | 18.207 | 6.368  | 1.00 | 64.07 |
| ATOM | 3734 | O   | PHE | 489 | 67.924 | 18.399 | 6.731  | 1.00 | 61.56 |
| ATOM | 3735 | N   | GLY | 490 | 66.171 | 17.005 | 6.349  | 1.00 | 60.79 |
| ATOM | 3737 | CA  | GLY | 490 | 66.852 | 15.803 | 6.797  | 1.00 | 54.72 |
| ATOM | 3738 | C   | GLY | 490 | 66.787 | 14.760 | 5.692  | 1.00 | 51.78 |
| ATOM | 3739 | O   | GLY | 490 | 65.765 | 14.624 | 5.013  | 1.00 | 49.17 |
| ATOM | 3740 | N   | GLN | 491 | 67.874 | 14.015 | 5.528  | 1.00 | 49.97 |
| ATOM | 3742 | CA  | GLN | 491 | 68.000 | 12.984 | 4.504  | 1.00 | 48.06 |
| ATOM | 3743 | CB  | GLN | 491 | 68.891 | 13.520 | 3.371  | 1.00 | 51.02 |
| ATOM | 3744 | CG  | GLN | 491 | 69.286 | 12.518 | 2.289  | 1.00 | 56.00 |
| ATOM | 3745 | CD  | GLN | 491 | 70.155 | 13.143 | 1.202  | 1.00 | 58.93 |
| ATOM | 3746 | OE1 | GLN | 491 | 70.483 | 14.330 | 1.255  | 1.00 | 60.31 |
| ATOM | 3747 | NE2 | GLN | 491 | 70.529 | 12.341 | 0.202  | 1.00 | 60.19 |
| ATOM | 3750 | C   | GLN | 491 | 68.623 | 11.720 | 5.114  | 1.00 | 45.59 |
| ATOM | 3751 | O   | GLN | 491 | 69.511 | 11.792 | 5.959  | 1.00 | 45.22 |
| ATOM | 3752 | N   | VAL | 492 | 68.148 | 10.561 | 4.693  | 1.00 | 43.19 |
| ATOM | 3754 | CA  | VAL | 492 | 68.676 | 9.304  | 5.193  | 1.00 | 41.54 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3755 | CB  | VAL | 492 | 67.655 | 8.584  | 6.087  | 1.00 | 41.74 |
| ATOM | 3756 | CG1 | VAL | 492 | 68.217 | 7.248  | 6.561  | 1.00 | 43.70 |
| ATOM | 3757 | CG2 | VAL | 492 | 67.283 | 9.463  | 7.269  | 1.00 | 44.07 |
| ATOM | 3758 | C   | VAL | 492 | 68.971 | 8.424  | 3.993  | 1.00 | 39.72 |
| ATOM | 3759 | O   | VAL | 492 | 68.125 | 8.271  | 3.108  | 1.00 | 39.81 |
| ATOM | 3760 | N   | VAL | 493 | 70.176 | 7.872  | 3.942  | 1.00 | 36.38 |
| ATOM | 3762 | CA  | VAL | 493 | 70.545 | 7.001  | 2.844  | 1.00 | 35.88 |
| ATOM | 3763 | CB  | VAL | 493 | 71.580 | 7.666  | 1.869  | 1.00 | 36.92 |
| ATOM | 3764 | CG1 | VAL | 493 | 71.142 | 9.069  | 1.485  | 1.00 | 36.64 |
| ATOM | 3765 | CG2 | VAL | 493 | 72.978 | 7.670  | 2.469  | 1.00 | 38.29 |
| ATOM | 3766 | C   | VAL | 493 | 71.131 | 5.689  | 3.351  | 1.00 | 36.03 |
| ATOM | 3767 | O   | VAL | 493 | 71.693 | 5.617  | 4.443  | 1.00 | 36.57 |
| ATOM | 3768 | N   | LEU | 494 | 70.947 | 4.637  | 2.571  | 1.00 | 34.91 |
| ATOM | 3770 | CA  | LEU | 494 | 71.500 | 3.344  | 2.909  | 1.00 | 36.04 |
| ATOM | 3771 | CB  | LEU | 494 | 70.809 | 2.244  | 2.094  | 1.00 | 37.43 |
| ATOM | 3772 | CG  | LEU | 494 | 71.312 | 0.814  | 2.269  | 1.00 | 36.62 |
| ATOM | 3773 | CD1 | LEU | 494 | 71.327 | 0.437  | 3.735  | 1.00 | 36.37 |
| ATOM | 3774 | CD2 | LEU | 494 | 70.419 | -0.118 | 1.479  | 1.00 | 40.70 |
| ATOM | 3775 | C   | LEU | 494 | 72.967 | 3.451  | 2.510  | 1.00 | 37.08 |
| ATOM | 3776 | O   | LEU | 494 | 73.308 | 4.160  | 1.560  | 1.00 | 34.90 |
| ATOM | 3777 | N   | ALA | 495 | 73.839 | 2.779  | 3.243  | 1.00 | 37.18 |
| ATOM | 3779 | CA  | ALA | 495 | 75.246 | 2.830  | 2.918  | 1.00 | 39.84 |
| ATOM | 3780 | CB  | ALA | 495 | 75.885 | 4.066  | 3.541  | 1.00 | 39.29 |
| ATOM | 3781 | C   | ALA | 495 | 75.949 | 1.578  | 3.400  | 1.00 | 41.68 |
| ATOM | 3782 | O   | ALA | 495 | 75.400 | 0.808  | 4.189  | 1.00 | 41.53 |
| ATOM | 3783 | N   | GLU | 496 | 77.149 | 1.348  | 2.881  | 1.00 | 43.44 |
| ATOM | 3785 | CA  | GLU | 496 | 77.936 | 0.202  | 3.297  | 1.00 | 42.86 |
| ATOM | 3786 | CB  | GLU | 496 | 78.328 | -0.663 | 2.101  | 1.00 | 44.63 |
| ATOM | 3787 | CG  | GLU | 496 | 77.120 | -1.167 | 1.320  | 1.00 | 53.31 |
| ATOM | 3788 | CD  | GLU | 496 | 77.386 | -2.450 | 0.545  | 1.00 | 59.48 |
| ATOM | 3789 | OE1 | GLU | 496 | 76.494 | -3.332 | 0.534  | 1.00 | 62.39 |
| ATOM | 3790 | OE2 | GLU | 496 | 78.477 | -2.580 | -0.053 | 1.00 | 62.15 |
| ATOM | 3791 | C   | GLU | 496 | 79.150 | 0.750  | 4.006  | 1.00 | 40.96 |
| ATOM | 3792 | O   | GLU | 496 | 79.889 | 1.568  | 3.455  | 1.00 | 40.81 |
| ATOM | 3793 | N   | ALA | 497 | 79.267 | 0.411  | 5.280  | 1.00 | 40.79 |
| ATOM | 3795 | CA  | ALA | 497 | 80.381 | 0.857  | 6.096  | 1.00 | 41.84 |
| ATOM | 3796 | CB  | ALA | 497 | 79.888 | 1.240  | 7.478  | 1.00 | 38.80 |
| ATOM | 3797 | C   | ALA | 497 | 81.394 | -0.280 | 6.181  | 1.00 | 44.72 |
| ATOM | 3798 | O   | ALA | 497 | 81.019 | -1.445 | 6.215  | 1.00 | 44.78 |
| ATOM | 3799 | N   | ILE | 498 | 82.678 | 0.054  | 6.183  | 1.00 | 48.03 |
| ATOM | 3801 | CA  | ILE | 498 | 83.729 | -0.952 | 6.255  | 1.00 | 48.78 |
| ATOM | 3802 | CB  | ILE | 498 | 84.654 | -0.894 | 5.014  | 1.00 | 50.57 |
| ATOM | 3803 | CG2 | ILE | 498 | 85.748 | -1.954 | 5.119  | 1.00 | 51.32 |
| ATOM | 3804 | CG1 | ILE | 498 | 83.851 | -1.103 | 3.726  | 1.00 | 51.90 |
| ATOM | 3805 | CD1 | ILE | 498 | 83.139 | 0.146  | 3.198  | 1.00 | 55.47 |
| ATOM | 3806 | C   | ILE | 498 | 84.573 | -0.754 | 7.511  | 1.00 | 48.31 |
| ATOM | 3807 | O   | ILE | 498 | 85.005 | 0.359  | 7.805  | 1.00 | 47.90 |
| ATOM | 3808 | N   | GLY | 499 | 84.754 | -1.829 | 8.271  | 1.00 | 49.29 |
| ATOM | 3810 | CA  | GLY | 499 | 85.563 | -1.774 | 9.479  | 1.00 | 53.17 |
| ATOM | 3811 | C   | GLY | 499 | 85.076 | -0.944 | 10.657 | 1.00 | 57.22 |
| ATOM | 3812 | O   | GLY | 499 | 85.885 | -0.341 | 11.364 | 1.00 | 59.20 |
| ATOM | 3813 | N   | LEU | 500 | 83.768 | -0.948 | 10.909 | 1.00 | 58.51 |
| ATOM | 3815 | CA  | LEU | 500 | 83.193 | -0.189 | 12.025 | 1.00 | 57.80 |
| ATOM | 3816 | CB  | LEU | 500 | 81.705 | -0.519 | 12.181 | 1.00 | 55.67 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3817 | CG  | LEU | 500 | 80.789 | 0.036  | 11.086 | 1.00 | 54.81 |
| ATOM | 3818 | CD1 | LEU | 500 | 79.361 | -0.445 | 11.293 | 1.00 | 53.00 |
| ATOM | 3819 | CD2 | LEU | 500 | 80.854 | 1.561  | 11.089 | 1.00 | 53.27 |
| ATOM | 3820 | C   | LEU | 500 | 83.926 | -0.466 | 13.333 | 1.00 | 58.15 |
| ATOM | 3821 | O   | LEU | 500 | 84.461 | -1.560 | 13.529 | 1.00 | 60.29 |
| ATOM | 3822 | N   | PRO | 505 | 87.397 | -6.022 | 10.511 | 1.00 | 77.18 |
| ATOM | 3823 | CD  | PRO | 505 | 88.509 | -6.651 | 11.242 | 1.00 | 78.26 |
| ATOM | 3824 | CA  | PRO | 505 | 87.755 | -4.660 | 10.097 | 1.00 | 75.62 |
| ATOM | 3825 | CB  | PRO | 505 | 89.166 | -4.487 | 10.669 | 1.00 | 75.77 |
| ATOM | 3826 | CG  | PRO | 505 | 89.696 | -5.884 | 10.715 | 1.00 | 77.07 |
| ATOM | 3827 | C   | PRO | 505 | 87.709 | -4.440 | 8.583  | 1.00 | 73.15 |
| ATOM | 3828 | O   | PRO | 505 | 87.772 | -3.308 | 8.105  | 1.00 | 72.63 |
| ATOM | 3829 | N   | ASN | 506 | 87.595 | -5.524 | 7.830  | 1.00 | 71.27 |
| ATOM | 3831 | CA  | ASN | 506 | 87.518 | -5.421 | 6.380  | 1.00 | 69.14 |
| ATOM | 3832 | CB  | ASN | 506 | 88.577 | -6.313 | 5.728  | 1.00 | 70.76 |
| ATOM | 3833 | C   | ASN | 506 | 86.119 | -5.840 | 5.940  | 1.00 | 67.30 |
| ATOM | 3834 | O   | ASN | 506 | 85.834 | -5.957 | 4.750  | 1.00 | 67.03 |
| ATOM | 3835 | N   | ARG | 507 | 85.250 | -6.064 | 6.921  | 1.00 | 65.27 |
| ATOM | 3837 | CA  | ARG | 507 | 83.876 | -6.479 | 6.669  | 1.00 | 62.86 |
| ATOM | 3838 | CB  | ARG | 507 | 83.335 | -7.267 | 7.864  | 1.00 | 65.45 |
| ATOM | 3839 | C   | ARG | 507 | 82.991 | -5.274 | 6.443  | 1.00 | 59.56 |
| ATOM | 3840 | O   | ARG | 507 | 83.161 | -4.247 | 7.100  | 1.00 | 59.70 |
| ATOM | 3841 | N   | VAL | 508 | 82.057 | -5.397 | 5.509  | 1.00 | 56.65 |
| ATOM | 3843 | CA  | VAL | 508 | 81.135 | -4.310 | 5.226  | 1.00 | 55.48 |
| ATOM | 3844 | CB  | VAL | 508 | 80.850 | -4.157 | 3.719  | 1.00 | 55.71 |
| ATOM | 3845 | CG1 | VAL | 508 | 82.146 | -3.962 | 2.962  | 1.00 | 58.18 |
| ATOM | 3846 | CG2 | VAL | 508 | 80.096 | -5.356 | 3.188  | 1.00 | 58.76 |
| ATOM | 3847 | C   | VAL | 508 | 79.833 | -4.537 | 5.979  | 1.00 | 53.10 |
| ATOM | 3848 | O   | VAL | 508 | 79.352 | -5.665 | 6.091  | 1.00 | 54.25 |
| ATOM | 3849 | N   | THR | 509 | 79.282 | -3.460 | 6.514  | 1.00 | 50.06 |
| ATOM | 3851 | CA  | THR | 509 | 78.041 | -3.512 | 7.260  | 1.00 | 45.70 |
| ATOM | 3852 | CB  | THR | 509 | 78.256 | -3.029 | 8.715  | 1.00 | 45.59 |
| ATOM | 3853 | OG1 | THR | 509 | 79.395 | -3.696 | 9.279  | 1.00 | 43.86 |
| ATOM | 3855 | CG2 | THR | 509 | 77.028 | -3.328 | 9.573  | 1.00 | 44.19 |
| ATOM | 3856 | C   | THR | 509 | 77.064 | -2.574 | 6.564  | 1.00 | 43.57 |
| ATOM | 3857 | O   | THR | 509 | 77.416 | -1.444 | 6.221  | 1.00 | 41.15 |
| ATOM | 3858 | N   | LYS | 510 | 75.871 | -3.073 | 6.268  | 1.00 | 42.96 |
| ATOM | 3860 | CA  | LYS | 510 | 74.847 | -2.253 | 5.640  | 1.00 | 41.91 |
| ATOM | 3861 | CB  | LYS | 510 | 73.740 | -3.144 | 5.091  | 1.00 | 44.74 |
| ATOM | 3862 | CG  | LYS | 510 | 72.864 | -2.461 | 4.069  | 1.00 | 51.83 |
| ATOM | 3863 | CD  | LYS | 510 | 73.392 | -2.645 | 2.659  | 1.00 | 55.00 |
| ATOM | 3864 | CE  | LYS | 510 | 72.769 | -3.879 | 2.020  | 1.00 | 58.36 |
| ATOM | 3865 | NZ  | LYS | 510 | 73.069 | -5.131 | 2.769  | 1.00 | 58.57 |
| ATOM | 3869 | C   | LYS | 510 | 74.322 | -1.367 | 6.789  | 1.00 | 40.74 |
| ATOM | 3870 | O   | LYS | 510 | 73.909 | -1.874 | 7.837  | 1.00 | 40.26 |
| ATOM | 3871 | N   | VAL | 511 | 74.413 | -0.052 | 6.624  | 1.00 | 37.21 |
| ATOM | 3873 | CA  | VAL | 511 | 73.989 | 0.877  | 7.661  | 1.00 | 33.44 |
| ATOM | 3874 | CB  | VAL | 511 | 75.227 | 1.515  | 8.362  | 1.00 | 34.53 |
| ATOM | 3875 | CG1 | VAL | 511 | 76.100 | 0.436  | 9.014  | 1.00 | 31.98 |
| ATOM | 3876 | CG2 | VAL | 511 | 76.048 | 2.322  | 7.358  | 1.00 | 34.82 |
| ATOM | 3877 | C   | VAL | 511 | 73.134 | 1.989  | 7.087  | 1.00 | 31.34 |
| ATOM | 3878 | O   | VAL | 511 | 73.025 | 2.130  | 5.871  | 1.00 | 31.33 |
| ATOM | 3879 | N   | ALA | 512 | 72.485 | 2.748  | 7.961  | 1.00 | 30.70 |
| ATOM | 3881 | CA  | ALA | 512 | 71.671 | 3.876  | 7.523  | 1.00 | 30.81 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3882 | CB  | ALA | 512 | 70.305 | 3.879  | 8.206  | 1.00 | 29.85 |
| ATOM | 3883 | C   | ALA | 512 | 72.453 | 5.124  | 7.904  | 1.00 | 31.30 |
| ATOM | 3884 | O   | ALA | 512 | 73.036 | 5.197  | 8.996  | 1.00 | 30.24 |
| ATOM | 3885 | N   | VAL | 513 | 72.480 | 6.096  | 6.999  | 1.00 | 30.86 |
| ATOM | 3887 | CA  | VAL | 513 | 73.208 | 7.332  | 7.238  | 1.00 | 30.58 |
| ATOM | 3888 | CB  | VAL | 513 | 74.358 | 7.525  | 6.223  | 1.00 | 31.11 |
| ATOM | 3889 | CG1 | VAL | 513 | 75.132 | 8.788  | 6.547  | 1.00 | 29.63 |
| ATOM | 3890 | CG2 | VAL | 513 | 75.290 | 6.317  | 6.223  | 1.00 | 28.70 |
| ATOM | 3891 | C   | VAL | 513 | 72.300 | 8.556  | 7.189  | 1.00 | 31.28 |
| ATOM | 3892 | O   | VAL | 513 | 71.645 | 8.824  | 6.167  | 1.00 | 30.12 |
| ATOM | 3893 | N   | LYS | 514 | 72.229 | 9.257  | 8.321  | 1.00 | 31.03 |
| ATOM | 3895 | CA  | LYS | 514 | 71.439 | 10.479 | 8.451  | 1.00 | 32.56 |
| ATOM | 3896 | CB  | LYS | 514 | 70.881 | 10.635 | 9.870  | 1.00 | 34.31 |
| ATOM | 3897 | CG  | LYS | 514 | 69.977 | 9.516  | 10.326 | 1.00 | 38.25 |
| ATOM | 3898 | CD  | LYS | 514 | 69.513 | 9.774  | 11.753 | 1.00 | 47.74 |
| ATOM | 3899 | CE  | LYS | 514 | 68.514 | 8.719  | 12.230 | 1.00 | 51.60 |
| ATOM | 3900 | NZ  | LYS | 514 | 67.226 | 8.755  | 11.468 | 1.00 | 58.53 |
| ATOM | 3904 | C   | LYS | 514 | 72.357 | 11.659 | 8.137  | 1.00 | 30.29 |
| ATOM | 3905 | O   | LYS | 514 | 73.485 | 11.736 | 8.628  | 1.00 | 28.14 |
| ATOM | 3906 | N   | MET | 515 | 71.867 | 12.580 | 7.320  | 1.00 | 30.67 |
| ATOM | 3908 | CA  | MET | 515 | 72.643 | 13.747 | 6.920  | 1.00 | 29.94 |
| ATOM | 3909 | CB  | MET | 515 | 73.435 | 13.442 | 5.648  | 1.00 | 30.64 |
| ATOM | 3910 | CG  | MET | 515 | 72.557 | 13.038 | 4.464  | 1.00 | 32.16 |
| ATOM | 3911 | SD  | MET | 515 | 73.525 | 12.522 | 3.036  | 1.00 | 37.59 |
| ATOM | 3912 | CE  | MET | 515 | 74.015 | 10.933 | 3.563  | 1.00 | 29.11 |
| ATOM | 3913 | C   | MET | 515 | 71.675 | 14.869 | 6.635  | 1.00 | 29.71 |
| ATOM | 3914 | O   | MET | 515 | 70.462 | 14.664 | 6.598  | 1.00 | 30.04 |
| ATOM | 3915 | N   | LEU | 516 | 72.212 | 16.060 | 6.445  | 1.00 | 29.56 |
| ATOM | 3917 | CA  | LEU | 516 | 71.381 | 17.206 | 6.136  | 1.00 | 30.76 |
| ATOM | 3918 | CB  | LEU | 516 | 72.093 | 18.508 | 6.526  | 1.00 | 28.20 |
| ATOM | 3919 | CG  | LEU | 516 | 72.396 | 18.724 | 8.011  | 1.00 | 28.48 |
| ATOM | 3920 | CD1 | LEU | 516 | 73.202 | 19.983 | 8.185  | 1.00 | 27.55 |
| ATOM | 3921 | CD2 | LEU | 516 | 71.114 | 18.814 | 8.794  | 1.00 | 25.49 |
| ATOM | 3922 | C   | LEU | 516 | 71.081 | 17.225 | 4.647  | 1.00 | 30.97 |
| ATOM | 3923 | O   | LEU | 516 | 71.728 | 16.534 | 3.851  | 1.00 | 29.93 |
| ATOM | 3924 | N   | LYS | 517 | 70.030 | 17.946 | 4.291  | 1.00 | 31.57 |
| ATOM | 3926 | CA  | LYS | 517 | 69.677 | 18.117 | 2.899  | 1.00 | 31.44 |
| ATOM | 3927 | CB  | LYS | 517 | 68.169 | 18.310 | 2.752  | 1.00 | 34.79 |
| ATOM | 3928 | CG  | LYS | 517 | 67.375 | 17.098 | 3.194  | 1.00 | 38.42 |
| ATOM | 3929 | CD  | LYS | 517 | 66.148 | 16.888 | 2.343  | 1.00 | 46.52 |
| ATOM | 3930 | CE  | LYS | 517 | 65.087 | 17.950 | 2.582  | 1.00 | 53.77 |
| ATOM | 3931 | NZ  | LYS | 517 | 63.901 | 17.740 | 1.690  | 1.00 | 56.38 |
| ATOM | 3935 | C   | LYS | 517 | 70.457 | 19.377 | 2.499  | 1.00 | 30.18 |
| ATOM | 3936 | O   | LYS | 517 | 70.892 | 20.134 | 3.370  | 1.00 | 27.47 |
| ATOM | 3937 | N   | SER | 518 | 70.646 | 19.594 | 1.201  | 1.00 | 31.13 |
| ATOM | 3939 | CA  | SER | 518 | 71.394 | 20.747 | 0.693  | 1.00 | 32.11 |
| ATOM | 3940 | CB  | SER | 518 | 71.518 | 20.652 | -0.824 | 1.00 | 33.45 |
| ATOM | 3941 | OG  | SER | 518 | 70.242 | 20.567 | -1.428 | 1.00 | 34.51 |
| ATOM | 3943 | C   | SER | 518 | 70.814 | 22.103 | 1.073  | 1.00 | 32.81 |
| ATOM | 3944 | O   | SER | 518 | 71.515 | 23.123 | 1.027  | 1.00 | 34.03 |
| ATOM | 3945 | N   | ASP | 519 | 69.540 | 22.117 | 1.449  | 1.00 | 29.80 |
| ATOM | 3947 | CA  | ASP | 519 | 68.886 | 23.354 | 1.836  | 1.00 | 28.94 |
| ATOM | 3948 | CB  | ASP | 519 | 67.473 | 23.421 | 1.237  | 1.00 | 33.90 |
| ATOM | 3949 | CG  | ASP | 519 | 66.542 | 22.332 | 1.771  | 1.00 | 34.42 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3950 | OD1 | ASP | 519 | 67.020 | 21.328 | 2.333  | 1.00 | 35.58 |
| ATOM | 3951 | OD2 | ASP | 519 | 65.313 | 22.485 | 1.617  | 1.00 | 41.83 |
| ATOM | 3952 | C   | ASP | 519 | 68.829 | 23.559 | 3.342  | 1.00 | 29.08 |
| ATOM | 3953 | O   | ASP | 519 | 68.177 | 24.485 | 3.816  | 1.00 | 29.79 |
| ATOM | 3954 | N   | ALA | 520 | 69.514 | 22.710 | 4.099  | 1.00 | 29.73 |
| ATOM | 3956 | CA  | ALA | 520 | 69.488 | 22.824 | 5.558  | 1.00 | 29.16 |
| ATOM | 3957 | CB  | ALA | 520 | 70.174 | 21.639 | 6.190  | 1.00 | 28.13 |
| ATOM | 3958 | C   | ALA | 520 | 70.122 | 24.108 | 6.040  | 1.00 | 28.06 |
| ATOM | 3959 | O   | ALA | 520 | 70.880 | 24.741 | 5.309  | 1.00 | 28.84 |
| ATOM | 3960 | N   | THR | 521 | 69.800 | 24.491 | 7.272  | 1.00 | 27.84 |
| ATOM | 3962 | CA  | THR | 521 | 70.357 | 25.692 | 7.885  | 1.00 | 30.45 |
| ATOM | 3963 | CB  | THR | 521 | 69.254 | 26.635 | 8.463  | 1.00 | 33.56 |
| ATOM | 3964 | OG1 | THR | 521 | 68.547 | 25.968 | 9.520  | 1.00 | 36.27 |
| ATOM | 3966 | CG2 | THR | 521 | 68.275 | 27.074 | 7.379  | 1.00 | 36.06 |
| ATOM | 3967 | C   | THR | 521 | 71.251 | 25.263 | 9.048  | 1.00 | 30.04 |
| ATOM | 3968 | O   | THR | 521 | 71.348 | 24.072 | 9.369  | 1.00 | 28.16 |
| ATOM | 3969 | N   | GLU | 522 | 71.876 | 26.241 | 9.696  | 1.00 | 31.42 |
| ATOM | 3971 | CA  | GLU | 522 | 72.745 | 25.978 | 10.832 | 1.00 | 36.94 |
| ATOM | 3972 | CB  | GLU | 522 | 73.404 | 27.282 | 11.299 | 1.00 | 44.74 |
| ATOM | 3973 | CG  | GLU | 522 | 74.414 | 27.130 | 12.450 | 1.00 | 58.34 |
| ATOM | 3974 | CD  | GLU | 522 | 75.769 | 26.579 | 12.009 | 1.00 | 64.50 |
| ATOM | 3975 | OE1 | GLU | 522 | 76.798 | 27.261 | 12.231 | 1.00 | 64.89 |
| ATOM | 3976 | OE2 | GLU | 522 | 75.806 | 25.461 | 11.452 | 1.00 | 70.26 |
| ATOM | 3977 | C   | GLU | 522 | 71.932 | 25.345 | 11.969 | 1.00 | 34.02 |
| ATOM | 3978 | O   | GLU | 522 | 72.428 | 24.480 | 12.684 | 1.00 | 31.11 |
| ATOM | 3979 | N   | LYS | 523 | 70.670 | 25.750 | 12.097 | 1.00 | 32.53 |
| ATOM | 3981 | CA  | LYS | 523 | 69.805 | 25.210 | 13.135 | 1.00 | 34.06 |
| ATOM | 3982 | CB  | LYS | 523 | 68.481 | 25.970 | 13.188 | 1.00 | 39.54 |
| ATOM | 3983 | CG  | LYS | 523 | 67.560 | 25.541 | 14.322 | 1.00 | 45.55 |
| ATOM | 3984 | CD  | LYS | 523 | 66.360 | 24.776 | 13.789 | 1.00 | 52.08 |
| ATOM | 3985 | CE  | LYS | 523 | 65.443 | 24.312 | 14.914 | 1.00 | 54.16 |
| ATOM | 3986 | NZ  | LYS | 523 | 64.313 | 23.509 | 14.373 | 1.00 | 54.38 |
| ATOM | 3990 | C   | LYS | 523 | 69.572 | 23.733 | 12.861 | 1.00 | 31.73 |
| ATOM | 3991 | O   | LYS | 523 | 69.589 | 22.922 | 13.788 | 1.00 | 31.15 |
| ATOM | 3992 | N   | ASP | 524 | 69.374 | 23.383 | 11.590 | 1.00 | 29.22 |
| ATOM | 3994 | CA  | ASP | 524 | 69.182 | 21.980 | 11.214 | 1.00 | 28.79 |
| ATOM | 3995 | CB  | ASP | 524 | 68.928 | 21.831 | 9.714  | 1.00 | 27.65 |
| ATOM | 3996 | CG  | ASP | 524 | 67.586 | 22.396 | 9.286  | 1.00 | 33.89 |
| ATOM | 3997 | OD1 | ASP | 524 | 66.568 | 22.106 | 9.954  | 1.00 | 34.66 |
| ATOM | 3998 | OD2 | ASP | 524 | 67.549 | 23.120 | 8.270  | 1.00 | 30.04 |
| ATOM | 3999 | C   | ASP | 524 | 70.424 | 21.190 | 11.606 | 1.00 | 28.00 |
| ATOM | 4000 | O   | ASP | 524 | 70.317 | 20.104 | 12.162 | 1.00 | 30.83 |
| ATOM | 4001 | N   | LEU | 525 | 71.603 | 21.761 | 11.347 | 1.00 | 29.87 |
| ATOM | 4003 | CA  | LEU | 525 | 72.873 | 21.121 | 11.700 | 1.00 | 27.60 |
| ATOM | 4004 | CB  | LEU | 525 | 74.064 | 21.997 | 11.282 | 1.00 | 24.08 |
| ATOM | 4005 | CG  | LEU | 525 | 75.462 | 21.433 | 11.593 | 1.00 | 26.11 |
| ATOM | 4006 | CD1 | LEU | 525 | 75.597 | 19.979 | 11.098 | 1.00 | 23.67 |
| ATOM | 4007 | CD2 | LEU | 525 | 76.530 | 22.321 | 10.967 | 1.00 | 21.28 |
| ATOM | 4008 | C   | LEU | 525 | 72.909 | 20.869 | 13.200 | 1.00 | 26.38 |
| ATOM | 4009 | O   | LEU | 525 | 73.249 | 19.777 | 13.653 | 1.00 | 26.09 |
| ATOM | 4010 | N   | SER | 526 | 72.560 | 21.902 | 13.956 | 1.00 | 29.72 |
| ATOM | 4012 | CA  | SER | 526 | 72.500 | 21.861 | 15.422 | 1.00 | 32.16 |
| ATOM | 4013 | CB  | SER | 526 | 71.980 | 23.209 | 15.939 | 1.00 | 33.45 |
| ATOM | 4014 | OG  | SER | 526 | 71.793 | 23.213 | 17.343 | 1.00 | 40.42 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4016 | C   | SER | 526 | 71.572 | 20.728 | 15.902 | 1.00 | 31.64 |
| ATOM | 4017 | O   | SER | 526 | 71.869 | 20.030 | 16.889 | 1.00 | 32.54 |
| ATOM | 4018 | N   | ASP | 527 | 70.454 | 20.561 | 15.201 | 1.00 | 27.92 |
| ATOM | 4020 | CA  | ASP | 527 | 69.492 | 19.527 | 15.524 | 1.00 | 28.60 |
| ATOM | 4021 | CB  | ASP | 527 | 68.187 | 19.767 | 14.765 | 1.00 | 29.35 |
| ATOM | 4022 | CG  | ASP | 527 | 67.418 | 20.984 | 15.278 | 1.00 | 31.37 |
| ATOM | 4023 | OD1 | ASP | 527 | 67.759 | 21.549 | 16.353 | 1.00 | 31.96 |
| ATOM | 4024 | OD2 | ASP | 527 | 66.456 | 21.369 | 14.591 | 1.00 | 32.58 |
| ATOM | 4025 | C   | ASP | 527 | 70.038 | 18.131 | 15.246 | 1.00 | 28.82 |
| ATOM | 4026 | O   | ASP | 527 | 69.854 | 17.212 | 16.047 | 1.00 | 29.65 |
| ATOM | 4027 | N   | LEU | 528 | 70.721 | 17.962 | 14.120 | 1.00 | 29.29 |
| ATOM | 4029 | CA  | LEU | 528 | 71.302 | 16.658 | 13.794 | 1.00 | 29.94 |
| ATOM | 4030 | CB  | LEU | 528 | 71.780 | 16.621 | 12.336 | 1.00 | 26.45 |
| ATOM | 4031 | CG  | LEU | 528 | 72.315 | 15.276 | 11.840 | 1.00 | 28.34 |
| ATOM | 4032 | CD1 | LEU | 528 | 71.240 | 14.189 | 12.035 | 1.00 | 27.16 |
| ATOM | 4033 | CD2 | LEU | 528 | 72.756 | 15.387 | 10.372 | 1.00 | 25.91 |
| ATOM | 4034 | C   | LEU | 528 | 72.449 | 16.319 | 14.776 | 1.00 | 29.72 |
| ATOM | 4035 | O   | LEU | 528 | 72.617 | 15.162 | 15.178 | 1.00 | 28.98 |
| ATOM | 4036 | N   | ILE | 529 | 73.224 | 17.329 | 15.168 | 1.00 | 30.15 |
| ATOM | 4038 | CA  | ILE | 529 | 74.305 | 17.131 | 16.134 | 1.00 | 28.88 |
| ATOM | 4039 | CB  | ILE | 529 | 75.188 | 18.382 | 16.268 | 1.00 | 26.91 |
| ATOM | 4040 | CG2 | ILE | 529 | 76.175 | 18.221 | 17.423 | 1.00 | 24.82 |
| ATOM | 4041 | CG1 | ILE | 529 | 75.960 | 18.613 | 14.984 | 1.00 | 23.98 |
| ATOM | 4042 | CD1 | ILE | 529 | 76.663 | 19.932 | 14.973 | 1.00 | 28.33 |
| ATOM | 4043 | C   | ILE | 529 | 73.709 | 16.799 | 17.518 | 1.00 | 29.71 |
| ATOM | 4044 | O   | ILE | 529 | 74.172 | 15.880 | 18.193 | 1.00 | 29.19 |
| ATOM | 4045 | N   | SER | 530 | 72.672 | 17.524 | 17.926 | 1.00 | 26.84 |
| ATOM | 4047 | CA  | SER | 530 | 72.061 | 17.247 | 19.214 | 1.00 | 31.46 |
| ATOM | 4048 | CB  | SER | 530 | 70.948 | 18.251 | 19.521 | 1.00 | 36.17 |
| ATOM | 4049 | OG  | SER | 530 | 70.045 | 18.363 | 18.431 | 1.00 | 47.58 |
| ATOM | 4051 | C   | SER | 530 | 71.526 | 15.822 | 19.248 | 1.00 | 30.05 |
| ATOM | 4052 | O   | SER | 530 | 71.646 | 15.136 | 20.270 | 1.00 | 29.61 |
| ATOM | 4053 | N   | GLU | 531 | 70.972 | 15.357 | 18.132 | 1.00 | 27.74 |
| ATOM | 4055 | CA  | GLU | 531 | 70.458 | 13.999 | 18.090 | 1.00 | 28.71 |
| ATOM | 4056 | CB  | GLU | 531 | 69.709 | 13.727 | 16.789 | 1.00 | 29.72 |
| ATOM | 4057 | CG  | GLU | 531 | 69.147 | 12.319 | 16.737 | 1.00 | 32.21 |
| ATOM | 4058 | CD  | GLU | 531 | 68.510 | 11.979 | 15.414 | 1.00 | 33.88 |
| ATOM | 4059 | OE1 | GLU | 531 | 68.026 | 10.846 | 15.281 | 1.00 | 37.60 |
| ATOM | 4060 | OE2 | GLU | 531 | 68.483 | 12.833 | 14.510 | 1.00 | 34.70 |
| ATOM | 4061 | C   | GLU | 531 | 71.578 | 12.974 | 18.271 | 1.00 | 28.91 |
| ATOM | 4062 | O   | GLU | 531 | 71.428 | 12.007 | 19.019 | 1.00 | 29.46 |
| ATOM | 4063 | N   | MET | 532 | 72.686 | 13.179 | 17.567 | 1.00 | 28.84 |
| ATOM | 4065 | CA  | MET | 532 | 73.851 | 12.296 | 17.648 | 1.00 | 29.35 |
| ATOM | 4066 | CB  | MET | 532 | 74.948 | 12.786 | 16.689 | 1.00 | 27.41 |
| ATOM | 4067 | CG  | MET | 532 | 76.299 | 12.117 | 16.872 | 1.00 | 26.71 |
| ATOM | 4068 | SD  | MET | 532 | 77.503 | 12.675 | 15.640 | 1.00 | 32.27 |
| ATOM | 4069 | CE  | MET | 532 | 77.732 | 14.400 | 16.117 | 1.00 | 24.10 |
| ATOM | 4070 | C   | MET | 532 | 74.389 | 12.280 | 19.078 | 1.00 | 28.80 |
| ATOM | 4071 | O   | MET | 532 | 74.700 | 11.230 | 19.630 | 1.00 | 29.74 |
| ATOM | 4072 | N   | GLU | 533 | 74.481 | 13.454 | 19.681 | 1.00 | 28.83 |
| ATOM | 4074 | CA  | GLU | 533 | 74.985 | 13.546 | 21.033 | 1.00 | 29.66 |
| ATOM | 4075 | CB  | GLU | 533 | 75.182 | 15.008 | 21.423 | 1.00 | 32.23 |
| ATOM | 4076 | CG  | GLU | 533 | 76.331 | 15.687 | 20.651 | 1.00 | 34.47 |
| ATOM | 4077 | CD  | GLU | 533 | 77.656 | 14.937 | 20.774 | 1.00 | 38.03 |

|      |      |     |     |     |        |        |        |      |       |      |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|------|
| ATOM | 4078 | OE1 | GLU | 533 | 78.168 | 14.780 | 21.903 | 1.00 | 39.75 |      |
| ATOM | 4079 | OE2 | GLU | 533 | 78.192 | 14.497 | 19.736 | 1.00 | 38.75 |      |
| ATOM | 4080 | C   | GLU | 533 | 74.058 | 12.815 | 22.005 | 1.00 | 31.55 |      |
| ATOM | 4081 | O   | GLU | 533 | 74.521 | 12.083 | 22.889 | 1.00 | 30.63 |      |
| ATOM | 4082 | N   | MET | 534 | 72.750 | 12.958 | 21.799 | 1.00 | 31.31 |      |
| ATOM | 4084 | CA  | MET | 534 | 71.789 | 12.289 | 22.664 | 1.00 | 30.78 |      |
| ATOM | 4085 | CB  | MET | 534 | 70.348 | 12.672 | 22.319 | 1.00 | 31.23 |      |
| ATOM | 4086 | CG  | MET | 534 | 69.453 | 12.648 | 23.551 | 0.50 | 29.35 | PRT1 |
| ATOM | 4087 | SD  | MET | 534 | 67.688 | 12.563 | 23.246 | 0.50 | 28.79 | PRT1 |
| ATOM | 4088 | CE  | MET | 534 | 67.290 | 14.230 | 22.875 | 0.50 | 26.96 | PRT1 |
| ATOM | 4089 | C   | MET | 534 | 71.991 | 10.773 | 22.560 | 1.00 | 28.82 |      |
| ATOM | 4090 | O   | MET | 534 | 72.053 | 10.083 | 23.568 | 1.00 | 30.10 |      |
| ATOM | 4091 | N   | MET | 535 | 72.149 | 10.271 | 21.339 | 1.00 | 29.16 |      |
| ATOM | 4093 | CA  | MET | 535 | 72.381 | 8.852  | 21.110 | 1.00 | 29.37 |      |
| ATOM | 4094 | CB  | MET | 535 | 72.546 | 8.551  | 19.617 | 1.00 | 27.35 |      |
| ATOM | 4095 | CG  | MET | 535 | 71.281 | 8.790  | 18.817 | 1.00 | 28.40 |      |
| ATOM | 4096 | SD  | MET | 535 | 71.255 | 7.955  | 17.255 | 1.00 | 30.26 |      |
| ATOM | 4097 | CE  | MET | 535 | 71.336 | 9.279  | 16.188 | 1.00 | 35.50 |      |
| ATOM | 4098 | C   | MET | 535 | 73.612 | 8.388  | 21.887 | 1.00 | 30.36 |      |
| ATOM | 4099 | O   | MET | 535 | 73.626 | 7.287  | 22.460 | 1.00 | 26.13 |      |
| ATOM | 4100 | N   | LYS | 536 | 74.640 | 9.233  | 21.909 | 1.00 | 30.70 |      |
| ATOM | 4102 | CA  | LYS | 536 | 75.850 | 8.913  | 22.649 | 1.00 | 31.76 |      |
| ATOM | 4103 | CB  | LYS | 536 | 76.934 | 9.954  | 22.388 | 1.00 | 31.05 |      |
| ATOM | 4104 | CG  | LYS | 536 | 77.550 | 9.883  | 21.004 | 1.00 | 26.80 |      |
| ATOM | 4105 | CD  | LYS | 536 | 78.534 | 11.017 | 20.860 | 1.00 | 31.05 |      |
| ATOM | 4106 | CE  | LYS | 536 | 79.132 | 11.138 | 19.466 | 1.00 | 29.83 |      |
| ATOM | 4107 | NZ  | LYS | 536 | 79.957 | 12.377 | 19.440 | 1.00 | 29.32 |      |
| ATOM | 4111 | C   | LYS | 536 | 75.550 | 8.834  | 24.150 | 1.00 | 31.99 |      |
| ATOM | 4112 | O   | LYS | 536 | 75.920 | 7.859  | 24.806 | 1.00 | 31.92 |      |
| ATOM | 4113 | N   | MET | 537 | 74.837 | 9.826  | 24.676 | 1.00 | 31.81 |      |
| ATOM | 4115 | CA  | MET | 537 | 74.517 | 9.835  | 26.090 | 1.00 | 35.37 |      |
| ATOM | 4116 | CB  | MET | 537 | 73.860 | 11.154 | 26.506 | 1.00 | 41.32 |      |
| ATOM | 4117 | CG  | MET | 537 | 74.828 | 12.335 | 26.610 | 1.00 | 51.50 |      |
| ATOM | 4118 | SD  | MET | 537 | 76.234 | 12.090 | 27.776 | 1.00 | 57.48 |      |
| ATOM | 4119 | CE  | MET | 537 | 75.460 | 12.637 | 29.334 | 1.00 | 56.91 |      |
| ATOM | 4120 | C   | MET | 537 | 73.630 | 8.679  | 26.499 | 1.00 | 36.11 |      |
| ATOM | 4121 | O   | MET | 537 | 73.845 | 8.084  | 27.548 | 1.00 | 38.54 |      |
| ATOM | 4122 | N   | ILE | 538 | 72.652 | 8.347  | 25.661 | 1.00 | 33.69 |      |
| ATOM | 4124 | CA  | ILE | 538 | 71.704 | 7.277  | 25.954 | 1.00 | 31.62 |      |
| ATOM | 4125 | CB  | ILE | 538 | 70.492 | 7.314  | 24.974 | 1.00 | 28.21 |      |
| ATOM | 4126 | CG2 | ILE | 538 | 69.681 | 6.013  | 25.034 | 1.00 | 28.22 |      |
| ATOM | 4127 | CG1 | ILE | 538 | 69.590 | 8.488  | 25.338 | 1.00 | 23.74 |      |
| ATOM | 4128 | CD1 | ILE | 538 | 68.487 | 8.728  | 24.344 | 1.00 | 27.94 |      |
| ATOM | 4129 | C   | ILE | 538 | 72.322 | 5.894  | 26.008 | 1.00 | 31.07 |      |
| ATOM | 4130 | O   | ILE | 538 | 71.952 | 5.080  | 26.860 | 1.00 | 33.13 |      |
| ATOM | 4131 | N   | GLY | 539 | 73.239 | 5.611  | 25.094 | 1.00 | 29.52 |      |
| ATOM | 4133 | CA  | GLY | 539 | 73.871 | 4.309  | 25.093 | 1.00 | 28.40 |      |
| ATOM | 4134 | C   | GLY | 539 | 73.111 | 3.275  | 24.289 | 1.00 | 30.21 |      |
| ATOM | 4135 | O   | GLY | 539 | 72.018 | 3.554  | 23.788 | 1.00 | 29.66 |      |
| ATOM | 4136 | N   | LYS | 540 | 73.679 | 2.074  | 24.199 | 1.00 | 28.44 |      |
| ATOM | 4138 | CA  | LYS | 540 | 73.105 | 0.984  | 23.426 | 1.00 | 31.09 |      |
| ATOM | 4139 | CB  | LYS | 540 | 74.215 | 0.089  | 22.895 | 1.00 | 33.15 |      |
| ATOM | 4140 | CG  | LYS | 540 | 75.116 | 0.776  | 21.906 | 1.00 | 39.54 |      |
| ATOM | 4141 | CD  | LYS | 540 | 76.125 | -0.175 | 21.329 | 1.00 | 43.98 |      |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4142 | CE  | LYS | 540 | 77.033 | 0.562  | 20.349 | 1.00 | 50.79 |
| ATOM | 4143 | NZ  | LYS | 540 | 76.338 | 0.977  | 19.086 | 1.00 | 51.09 |
| ATOM | 4147 | C   | LYS | 540 | 72.053 | 0.087  | 24.059 | 1.00 | 32.78 |
| ATOM | 4148 | O   | LYS | 540 | 72.088 | -0.195 | 25.266 | 1.00 | 32.41 |
| ATOM | 4149 | N   | HIS | 541 | 71.137 | -0.374 | 23.208 | 1.00 | 31.20 |
| ATOM | 4151 | CA  | HIS | 541 | 70.080 | -1.304 | 23.591 | 1.00 | 31.53 |
| ATOM | 4152 | CB  | HIS | 541 | 68.911 | -0.630 | 24.298 | 1.00 | 30.69 |
| ATOM | 4153 | CG  | HIS | 541 | 67.948 | -1.613 | 24.882 | 1.00 | 31.18 |
| ATOM | 4154 | CD2 | HIS | 541 | 67.938 | -2.255 | 26.072 | 1.00 | 33.02 |
| ATOM | 4155 | ND1 | HIS | 541 | 66.882 | -2.123 | 24.165 | 1.00 | 30.56 |
| ATOM | 4157 | CE1 | HIS | 541 | 66.268 | -3.037 | 24.889 | 1.00 | 32.95 |
| ATOM | 4158 | NE2 | HIS | 541 | 66.886 | -3.140 | 26.053 | 1.00 | 31.79 |
| ATOM | 4160 | C   | HIS | 541 | 69.590 | -2.013 | 22.340 | 1.00 | 32.72 |
| ATOM | 4161 | O   | HIS | 541 | 69.495 | -1.404 | 21.275 | 1.00 | 30.34 |
| ATOM | 4162 | N   | LYS | 542 | 69.282 | -3.305 | 22.475 | 1.00 | 32.32 |
| ATOM | 4164 | CA  | LYS | 542 | 68.828 | -4.131 | 21.359 | 1.00 | 30.29 |
| ATOM | 4165 | CB  | LYS | 542 | 68.637 | -5.587 | 21.798 | 1.00 | 29.34 |
| ATOM | 4166 | C   | LYS | 542 | 67.560 | -3.661 | 20.692 | 1.00 | 29.09 |
| ATOM | 4167 | O   | LYS | 542 | 67.369 | -3.903 | 19.507 | 1.00 | 29.12 |
| ATOM | 4168 | N   | ASN | 543 | 66.683 | -3.012 | 21.446 | 1.00 | 28.54 |
| ATOM | 4170 | CA  | ASN | 543 | 65.425 | -2.559 | 20.869 | 1.00 | 29.10 |
| ATOM | 4171 | CB  | ASN | 543 | 64.245 | -3.047 | 21.712 | 1.00 | 29.69 |
| ATOM | 4172 | CG  | ASN | 543 | 64.253 | -4.556 | 21.900 | 1.00 | 29.62 |
| ATOM | 4173 | OD1 | ASN | 543 | 64.510 | -5.050 | 23.000 | 1.00 | 31.63 |
| ATOM | 4174 | ND2 | ASN | 543 | 64.020 | -5.291 | 20.828 | 1.00 | 28.66 |
| ATOM | 4177 | C   | ASN | 543 | 65.299 | -1.073 | 20.532 | 1.00 | 29.61 |
| ATOM | 4178 | O   | ASN | 543 | 64.207 | -0.507 | 20.578 | 1.00 | 28.00 |
| ATOM | 4179 | N   | ILE | 544 | 66.432 | -0.442 | 20.222 | 1.00 | 28.39 |
| ATOM | 4181 | CA  | ILE | 544 | 66.466 | 0.958  | 19.804 | 1.00 | 25.73 |
| ATOM | 4182 | CB  | ILE | 544 | 66.903 | 1.952  | 20.935 | 1.00 | 25.98 |
| ATOM | 4183 | CG2 | ILE | 544 | 66.083 | 1.721  | 22.215 | 1.00 | 22.04 |
| ATOM | 4184 | CG1 | ILE | 544 | 68.412 | 1.860  | 21.209 | 1.00 | 24.30 |
| ATOM | 4185 | CD1 | ILE | 544 | 68.901 | 2.846  | 22.274 | 1.00 | 22.83 |
| ATOM | 4186 | C   | ILE | 544 | 67.463 | 1.020  | 18.639 | 1.00 | 26.20 |
| ATOM | 4187 | O   | ILE | 544 | 68.276 | 0.106  | 18.467 | 1.00 | 25.46 |
| ATOM | 4188 | N   | ILE | 545 | 67.307 | 2.016  | 17.771 | 1.00 | 26.26 |
| ATOM | 4190 | CA  | ILE | 545 | 68.223 | 2.209  | 16.641 | 1.00 | 27.62 |
| ATOM | 4191 | CB  | ILE | 545 | 67.647 | 3.195  | 15.585 | 1.00 | 28.33 |
| ATOM | 4192 | CG2 | ILE | 545 | 68.726 | 3.595  | 14.562 | 1.00 | 28.00 |
| ATOM | 4193 | CG1 | ILE | 545 | 66.453 | 2.565  | 14.856 | 1.00 | 24.69 |
| ATOM | 4194 | CD1 | ILE | 545 | 66.850 | 1.467  | 13.875 | 1.00 | 26.17 |
| ATOM | 4195 | C   | ILE | 545 | 69.492 | 2.794  | 17.267 | 1.00 | 28.23 |
| ATOM | 4196 | O   | ILE | 545 | 69.468 | 3.872  | 17.846 | 1.00 | 28.97 |
| ATOM | 4197 | N   | ASN | 546 | 70.595 | 2.069  | 17.164 | 1.00 | 29.45 |
| ATOM | 4199 | CA  | ASN | 546 | 71.845 | 2.508  | 17.774 | 1.00 | 28.58 |
| ATOM | 4200 | CB  | ASN | 546 | 72.580 | 1.309  | 18.384 | 1.00 | 26.34 |
| ATOM | 4201 | CG  | ASN | 546 | 71.812 | 0.673  | 19.527 | 1.00 | 25.52 |
| ATOM | 4202 | OD1 | ASN | 546 | 71.634 | 1.277  | 20.580 | 1.00 | 28.82 |
| ATOM | 4203 | ND2 | ASN | 546 | 71.341 | -0.542 | 19.318 | 1.00 | 26.57 |
| ATOM | 4206 | C   | ASN | 546 | 72.810 | 3.264  | 16.881 | 1.00 | 28.74 |
| ATOM | 4207 | O   | ASN | 546 | 72.858 | 3.041  | 15.675 | 1.00 | 29.26 |
| ATOM | 4208 | N   | LEU | 547 | 73.578 | 4.155  | 17.504 | 1.00 | 29.90 |
| ATOM | 4210 | CA  | LEU | 547 | 74.618 | 4.936  | 16.834 | 1.00 | 30.27 |
| ATOM | 4211 | CB  | LEU | 547 | 75.075 | 6.081  | 17.745 | 1.00 | 25.85 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4212 | CG  | LEU | 547 | 76.161 | 7.034  | 17.232 | 1.00 | 27.73 |
| ATOM | 4213 | CD1 | LEU | 547 | 75.670 | 7.851  | 16.033 | 1.00 | 27.38 |
| ATOM | 4214 | CD2 | LEU | 547 | 76.545 | 7.966  | 18.345 | 1.00 | 29.14 |
| ATOM | 4215 | C   | LEU | 547 | 75.811 | 4.004  | 16.567 | 1.00 | 32.22 |
| ATOM | 4216 | O   | LEU | 547 | 76.256 | 3.291  | 17.471 | 1.00 | 33.38 |
| ATOM | 4217 | N   | LEU | 548 | 76.317 | 4.005  | 15.335 | 1.00 | 32.12 |
| ATOM | 4219 | CA  | LEU | 548 | 77.452 | 3.159  | 14.960 | 1.00 | 32.94 |
| ATOM | 4220 | CB  | LEU | 548 | 77.103 | 2.310  | 13.740 | 1.00 | 29.97 |
| ATOM | 4221 | CG  | LEU | 548 | 75.839 | 1.458  | 13.840 | 1.00 | 31.55 |
| ATOM | 4222 | CD1 | LEU | 548 | 75.662 | 0.713  | 12.540 | 1.00 | 27.85 |
| ATOM | 4223 | CD2 | LEU | 548 | 75.917 | 0.500  | 15.025 | 1.00 | 26.34 |
| ATOM | 4224 | C   | LEU | 548 | 78.726 | 3.955  | 14.654 | 1.00 | 36.06 |
| ATOM | 4225 | O   | LEU | 548 | 79.836 | 3.410  | 14.668 | 1.00 | 36.42 |
| ATOM | 4226 | N   | GLY | 549 | 78.562 | 5.219  | 14.298 | 1.00 | 35.78 |
| ATOM | 4228 | CA  | GLY | 549 | 79.713 | 6.042  | 13.987 | 1.00 | 36.22 |
| ATOM | 4229 | C   | GLY | 549 | 79.267 | 7.376  | 13.433 | 1.00 | 35.30 |
| ATOM | 4230 | O   | GLY | 549 | 78.062 | 7.646  | 13.362 | 1.00 | 33.46 |
| ATOM | 4231 | N   | ALA | 550 | 80.232 | 8.206  | 13.042 | 1.00 | 34.94 |
| ATOM | 4233 | CA  | ALA | 550 | 79.945 | 9.525  | 12.490 | 1.00 | 31.91 |
| ATOM | 4234 | CB  | ALA | 550 | 79.588 | 10.495 | 13.613 | 1.00 | 30.54 |
| ATOM | 4235 | C   | ALA | 550 | 81.128 | 10.077 | 11.715 | 1.00 | 31.58 |
| ATOM | 4236 | O   | ALA | 550 | 82.281 | 9.832  | 12.080 | 1.00 | 31.23 |
| ATOM | 4237 | N   | CYS | 551 | 80.818 | 10.812 | 10.643 | 1.00 | 31.13 |
| ATOM | 4239 | CA  | CYS | 551 | 81.805 | 11.503 | 9.804  | 1.00 | 28.28 |
| ATOM | 4240 | CB  | CYS | 551 | 81.621 | 11.180 | 8.316  | 1.00 | 27.27 |
| ATOM | 4241 | SG  | CYS | 551 | 81.771 | 9.449  | 7.839  | 1.00 | 30.33 |
| ATOM | 4242 | C   | CYS | 551 | 81.450 | 12.960 | 10.074 | 1.00 | 25.88 |
| ATOM | 4243 | O   | CYS | 551 | 80.432 | 13.458 | 9.605  | 1.00 | 27.73 |
| ATOM | 4244 | N   | THR | 552 | 82.214 | 13.586 | 10.954 | 1.00 | 25.35 |
| ATOM | 4246 | CA  | THR | 552 | 81.988 | 14.967 | 11.353 | 1.00 | 26.79 |
| ATOM | 4247 | CB  | THR | 552 | 82.051 | 15.092 | 12.899 | 1.00 | 27.76 |
| ATOM | 4248 | OG1 | THR | 552 | 83.392 | 14.839 | 13.338 | 1.00 | 27.62 |
| ATOM | 4250 | CG2 | THR | 552 | 81.119 | 14.086 | 13.575 | 1.00 | 29.17 |
| ATOM | 4251 | C   | THR | 552 | 83.036 | 15.931 | 10.790 | 1.00 | 25.03 |
| ATOM | 4252 | O   | THR | 552 | 82.825 | 17.137 | 10.746 | 1.00 | 25.34 |
| ATOM | 4253 | N   | GLN | 553 | 84.174 | 15.385 | 10.381 | 1.00 | 27.34 |
| ATOM | 4255 | CA  | GLN | 553 | 85.285 | 16.190 | 9.888  | 1.00 | 26.31 |
| ATOM | 4256 | CB  | GLN | 553 | 86.601 | 15.639 | 10.468 | 1.00 | 25.05 |
| ATOM | 4257 | CG  | GLN | 553 | 86.581 | 15.491 | 11.993 | 1.00 | 24.78 |
| ATOM | 4258 | CD  | GLN | 553 | 86.382 | 16.823 | 12.709 | 1.00 | 25.40 |
| ATOM | 4259 | OE1 | GLN | 553 | 87.175 | 17.748 | 12.546 | 1.00 | 33.74 |
| ATOM | 4260 | NE2 | GLN | 553 | 85.338 | 16.920 | 13.516 | 1.00 | 25.61 |
| ATOM | 4263 | C   | GLN | 553 | 85.390 | 16.274 | 8.379  | 1.00 | 27.08 |
| ATOM | 4264 | O   | GLN | 553 | 85.083 | 15.318 | 7.669  | 1.00 | 28.76 |
| ATOM | 4265 | N   | ASP | 554 | 85.804 | 17.438 | 7.899  | 1.00 | 28.63 |
| ATOM | 4267 | CA  | ASP | 554 | 86.015 | 17.677 | 6.471  | 1.00 | 29.70 |
| ATOM | 4268 | CB  | ASP | 554 | 87.335 | 17.050 | 6.051  | 1.00 | 29.73 |
| ATOM | 4269 | CG  | ASP | 554 | 88.480 | 17.587 | 6.857  | 1.00 | 33.38 |
| ATOM | 4270 | OD1 | ASP | 554 | 88.794 | 18.780 | 6.711  | 1.00 | 36.53 |
| ATOM | 4271 | OD2 | ASP | 554 | 89.024 | 16.841 | 7.687  | 1.00 | 36.40 |
| ATOM | 4272 | C   | ASP | 554 | 84.908 | 17.258 | 5.522  | 1.00 | 29.64 |
| ATOM | 4273 | O   | ASP | 554 | 85.112 | 16.422 | 4.643  | 1.00 | 32.06 |
| ATOM | 4274 | N   | GLY | 555 | 83.748 | 17.881 | 5.679  | 1.00 | 28.59 |
| ATOM | 4276 | CA  | GLY | 555 | 82.620 | 17.579 | 4.825  | 1.00 | 26.85 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4277 | C   | GLY | 555 | 81.333 | 17.434 | 5.607  | 1.00 | 25.30 |
| ATOM | 4278 | O   | GLY | 555 | 81.319 | 17.593 | 6.834  | 1.00 | 23.96 |
| ATOM | 4279 | N   | PRO | 556 | 80.229 | 17.113 | 4.920  | 1.00 | 24.84 |
| ATOM | 4280 | CD  | PRO | 556 | 80.159 | 16.850 | 3.472  | 1.00 | 21.36 |
| ATOM | 4281 | CA  | PRO | 556 | 78.920 | 16.942 | 5.550  | 1.00 | 25.26 |
| ATOM | 4282 | CB  | PRO | 556 | 78.033 | 16.494 | 4.386  | 1.00 | 23.37 |
| ATOM | 4283 | CG  | PRO | 556 | 79.025 | 15.881 | 3.398  | 1.00 | 24.44 |
| ATOM | 4284 | C   | PRO | 556 | 78.885 | 15.941 | 6.700  | 1.00 | 26.50 |
| ATOM | 4285 | O   | PRO | 556 | 79.515 | 14.875 | 6.654  | 1.00 | 27.38 |
| ATOM | 4286 | N   | LEU | 557 | 78.171 | 16.314 | 7.754  | 1.00 | 26.25 |
| ATOM | 4288 | CA  | LEU | 557 | 78.032 | 15.452 | 8.917  | 1.00 | 28.25 |
| ATOM | 4289 | CB  | LEU | 557 | 77.403 | 16.217 | 10.092 | 1.00 | 27.09 |
| ATOM | 4290 | CG  | LEU | 557 | 76.922 | 15.414 | 11.310 | 1.00 | 28.35 |
| ATOM | 4291 | CD1 | LEU | 557 | 78.088 | 14.733 | 12.011 | 1.00 | 25.54 |
| ATOM | 4292 | CD2 | LEU | 557 | 76.204 | 16.340 | 12.271 | 1.00 | 26.91 |
| ATOM | 4293 | C   | LEU | 557 | 77.169 | 14.246 | 8.554  | 1.00 | 29.06 |
| ATOM | 4294 | O   | LEU | 557 | 76.060 | 14.385 | 8.011  | 1.00 | 29.05 |
| ATOM | 4295 | N   | TYR | 558 | 77.717 | 13.065 | 8.807  | 1.00 | 29.43 |
| ATOM | 4297 | CA  | TYR | 558 | 77.018 | 11.823 | 8.573  | 1.00 | 28.02 |
| ATOM | 4298 | CB  | TYR | 558 | 77.813 | 10.918 | 7.632  | 1.00 | 27.83 |
| ATOM | 4299 | CG  | TYR | 558 | 77.969 | 11.414 | 6.203  | 1.00 | 31.70 |
| ATOM | 4300 | CD1 | TYR | 558 | 78.966 | 10.893 | 5.383  | 1.00 | 32.90 |
| ATOM | 4301 | CE1 | TYR | 558 | 79.121 | 11.315 | 4.073  | 1.00 | 32.69 |
| ATOM | 4302 | CD2 | TYR | 558 | 77.122 | 12.386 | 5.666  | 1.00 | 30.23 |
| ATOM | 4303 | CE2 | TYR | 558 | 77.271 | 12.815 | 4.350  | 1.00 | 29.97 |
| ATOM | 4304 | CZ  | TYR | 558 | 78.280 | 12.272 | 3.560  | 1.00 | 33.20 |
| ATOM | 4305 | OH  | TYR | 558 | 78.452 | 12.681 | 2.253  | 1.00 | 35.32 |
| ATOM | 4307 | C   | TYR | 558 | 76.848 | 11.131 | 9.932  | 1.00 | 28.42 |
| ATOM | 4308 | O   | TYR | 558 | 77.823 | 10.902 | 10.647 | 1.00 | 27.81 |
| ATOM | 4309 | N   | VAL | 559 | 75.601 | 10.870 | 10.313 | 1.00 | 29.20 |
| ATOM | 4311 | CA  | VAL | 559 | 75.286 | 10.175 | 11.564 | 1.00 | 29.17 |
| ATOM | 4312 | CB  | VAL | 559 | 74.102 | 10.832 | 12.329 | 1.00 | 28.53 |
| ATOM | 4313 | CG1 | VAL | 559 | 73.802 | 10.036 | 13.607 | 1.00 | 27.08 |
| ATOM | 4314 | CG2 | VAL | 559 | 74.456 | 12.281 | 12.687 | 1.00 | 23.27 |
| ATOM | 4315 | C   | VAL | 559 | 74.911 | 8.772  | 11.137 | 1.00 | 26.41 |
| ATOM | 4316 | O   | VAL | 559 | 73.834 | 8.536  | 10.593 | 1.00 | 25.91 |
| ATOM | 4317 | N   | ILE | 560 | 75.824 | 7.846  | 11.371 | 1.00 | 26.71 |
| ATOM | 4319 | CA  | ILE | 560 | 75.638 | 6.465  | 10.966 | 1.00 | 27.55 |
| ATOM | 4320 | CB  | ILE | 560 | 77.012 | 5.829  | 10.619 | 1.00 | 28.48 |
| ATOM | 4321 | CG2 | ILE | 560 | 76.819 | 4.468  | 9.979  | 1.00 | 29.18 |
| ATOM | 4322 | CG1 | ILE | 560 | 77.793 | 6.745  | 9.657  | 1.00 | 27.99 |
| ATOM | 4323 | CD1 | ILE | 560 | 79.274 | 6.399  | 9.525  | 1.00 | 28.97 |
| ATOM | 4324 | C   | ILE | 560 | 74.917 | 5.644  | 12.034 | 1.00 | 29.17 |
| ATOM | 4325 | O   | ILE | 560 | 75.404 | 5.497  | 13.160 | 1.00 | 28.92 |
| ATOM | 4326 | N   | VAL | 561 | 73.743 | 5.129  | 11.681 | 1.00 | 28.60 |
| ATOM | 4328 | CA  | VAL | 561 | 72.957 | 4.325  | 12.606 | 1.00 | 28.58 |
| ATOM | 4329 | CB  | VAL | 561 | 71.634 | 5.061  | 13.047 | 1.00 | 27.53 |
| ATOM | 4330 | CG1 | VAL | 561 | 71.951 | 6.400  | 13.701 | 1.00 | 22.44 |
| ATOM | 4331 | CG2 | VAL | 561 | 70.697 | 5.246  | 11.874 | 1.00 | 23.19 |
| ATOM | 4332 | C   | VAL | 561 | 72.618 | 2.956  | 12.006 | 1.00 | 28.20 |
| ATOM | 4333 | O   | VAL | 561 | 72.875 | 2.694  | 10.825 | 1.00 | 27.99 |
| ATOM | 4334 | N   | GLU | 562 | 72.057 | 2.079  | 12.834 | 1.00 | 29.17 |
| ATOM | 4336 | CA  | GLU | 562 | 71.666 | 0.744  | 12.399 | 1.00 | 28.96 |
| ATOM | 4337 | CB  | GLU | 562 | 71.199 | -0.086 | 13.589 | 1.00 | 27.34 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4338 | CG  | GLU | 562 | 72.308 | -0.331  | 14.583 | 1.00 | 30.12 |
| ATOM | 4339 | CD  | GLU | 562 | 71.838 | -1.075  | 15.808 | 1.00 | 32.29 |
| ATOM | 4340 | OE1 | GLU | 562 | 72.526 | -2.030  | 16.217 | 1.00 | 32.45 |
| ATOM | 4341 | OE2 | GLU | 562 | 70.785 | -0.702  | 16.362 | 1.00 | 30.16 |
| ATOM | 4342 | C   | GLU | 562 | 70.580 | 0.794   | 11.340 | 1.00 | 29.79 |
| ATOM | 4343 | O   | GLU | 562 | 69.690 | 1.653   | 11.386 | 1.00 | 29.75 |
| ATOM | 4344 | N   | TYR | 563 | 70.684 | -0.106  | 10.369 | 1.00 | 30.51 |
| ATOM | 4346 | CA  | TYR | 563 | 69.735 | -0.209  | 9.267  | 1.00 | 33.76 |
| ATOM | 4347 | CB  | TYR | 563 | 70.494 | -0.602  | 7.988  | 1.00 | 31.04 |
| ATOM | 4348 | CG  | TYR | 563 | 69.624 | -0.928  | 6.806  | 1.00 | 33.40 |
| ATOM | 4349 | CD1 | TYR | 563 | 68.693 | -0.019  | 6.340  | 1.00 | 33.07 |
| ATOM | 4350 | CE1 | TYR | 563 | 67.908 | -0.301  | 5.240  | 1.00 | 34.71 |
| ATOM | 4351 | CD2 | TYR | 563 | 69.749 | -2.141  | 6.147  | 1.00 | 34.61 |
| ATOM | 4352 | CE2 | TYR | 563 | 68.970 | -2.446  | 5.035  | 1.00 | 36.54 |
| ATOM | 4353 | CZ  | TYR | 563 | 68.047 | -1.518  | 4.589  | 1.00 | 36.83 |
| ATOM | 4354 | OH  | TYR | 563 | 67.261 | -1.805  | 3.501  | 1.00 | 38.81 |
| ATOM | 4356 | C   | TYR | 563 | 68.655 | -1.269  | 9.588  | 1.00 | 36.14 |
| ATOM | 4357 | O   | TYR | 563 | 68.946 | -2.365  | 10.023 | 1.00 | 37.70 |
| ATOM | 4358 | N   | ALA | 564 | 67.406 | -0.948  | 9.309  | 1.00 | 37.87 |
| ATOM | 4360 | CA  | ALA | 564 | 66.276 | -1.832  | 9.534  | 1.00 | 38.49 |
| ATOM | 4361 | CB  | ALA | 564 | 65.278 | -1.167  | 10.458 | 1.00 | 42.57 |
| ATOM | 4362 | C   | ALA | 564 | 65.645 | -2.153  | 8.179  | 1.00 | 39.65 |
| ATOM | 4363 | O   | ALA | 564 | 64.796 | -1.423  | 7.687  | 1.00 | 39.74 |
| ATOM | 4364 | N   | SER | 565 | 66.039 | -3.280  | 7.607  | 1.00 | 40.06 |
| ATOM | 4366 | CA  | SER | 565 | 65.567 | -3.699  | 6.295  | 1.00 | 40.67 |
| ATOM | 4367 | CB  | SER | 565 | 66.267 | -4.986  | 5.883  | 1.00 | 38.71 |
| ATOM | 4368 | OG  | SER | 565 | 66.107 | -5.964  | 6.889  | 1.00 | 41.35 |
| ATOM | 4370 | C   | SER | 565 | 64.081 | -3.884  | 6.106  | 1.00 | 42.17 |
| ATOM | 4371 | O   | SER | 565 | 63.585 | -3.741  | 4.992  | 1.00 | 44.25 |
| ATOM | 4372 | N   | LYS | 566 | 63.360 | -4.207  | 7.167  | 1.00 | 41.71 |
| ATOM | 4374 | CA  | LYS | 566 | 61.928 | -4.427  | 7.015  | 1.00 | 40.22 |
| ATOM | 4375 | CB  | LYS | 566 | 61.525 | -5.668  | 7.800  | 1.00 | 39.51 |
| ATOM | 4376 | CG  | LYS | 566 | 62.202 | -6.910  | 7.226  | 1.00 | 41.48 |
| ATOM | 4377 | CD  | LYS | 566 | 62.113 | -8.094  | 8.149  | 1.00 | 41.53 |
| ATOM | 4378 | CE  | LYS | 566 | 62.710 | -9.312  | 7.491  | 1.00 | 41.18 |
| ATOM | 4379 | NZ  | LYS | 566 | 62.763 | -10.458 | 8.438  | 1.00 | 46.17 |
| ATOM | 4383 | C   | LYS | 566 | 61.007 | -3.220  | 7.263  | 1.00 | 40.47 |
| ATOM | 4384 | O   | LYS | 566 | 59.800 | -3.367  | 7.486  | 1.00 | 42.68 |
| ATOM | 4385 | N   | GLY | 567 | 61.584 | -2.026  | 7.167  | 1.00 | 38.90 |
| ATOM | 4387 | CA  | GLY | 567 | 60.826 | -0.799  | 7.336  | 1.00 | 37.13 |
| ATOM | 4388 | C   | GLY | 567 | 60.199 | -0.592  | 8.694  | 1.00 | 36.72 |
| ATOM | 4389 | O   | GLY | 567 | 60.644 | -1.172  | 9.683  | 1.00 | 38.48 |
| ATOM | 4390 | N   | ASN | 568 | 59.191 | 0.273   | 8.753  | 1.00 | 35.77 |
| ATOM | 4392 | CA  | ASN | 568 | 58.518 | 0.549   | 10.015 | 1.00 | 35.36 |
| ATOM | 4393 | CB  | ASN | 568 | 57.883 | 1.957   | 10.045 | 1.00 | 36.30 |
| ATOM | 4394 | CG  | ASN | 568 | 56.635 | 2.088   | 9.169  | 1.00 | 38.06 |
| ATOM | 4395 | OD1 | ASN | 568 | 55.623 | 1.421   | 9.383  | 1.00 | 38.66 |
| ATOM | 4396 | ND2 | ASN | 568 | 56.686 | 3.010   | 8.221  | 1.00 | 37.29 |
| ATOM | 4399 | C   | ASN | 568 | 57.504 | -0.532  | 10.341 | 1.00 | 33.04 |
| ATOM | 4400 | O   | ASN | 568 | 57.061 | -1.265  | 9.461  | 1.00 | 32.10 |
| ATOM | 4401 | N   | LEU | 569 | 57.142 | -0.612  | 11.617 | 1.00 | 33.59 |
| ATOM | 4403 | CA  | LEU | 569 | 56.199 | -1.604  | 12.132 | 1.00 | 32.91 |
| ATOM | 4404 | CB  | LEU | 569 | 56.045 | -1.428  | 13.647 | 1.00 | 33.84 |
| ATOM | 4405 | CG  | LEU | 569 | 55.088 | -2.343  | 14.403 | 1.00 | 31.96 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4406 | CD1 | LEU | 569 | 55.522 | -3.797 | 14.216 | 1.00 | 33.20 |
| ATOM | 4407 | CD2 | LEU | 569 | 55.089 | -1.967 | 15.868 | 1.00 | 30.81 |
| ATOM | 4408 | C   | LEU | 569 | 54.820 | -1.591 | 11.478 | 1.00 | 32.12 |
| ATOM | 4409 | O   | LEU | 569 | 54.214 | -2.645 | 11.300 | 1.00 | 33.08 |
| ATOM | 4410 | N   | ARG | 570 | 54.315 | -0.409 | 11.148 | 1.00 | 32.05 |
| ATOM | 4412 | CA  | ARG | 570 | 52.999 | -0.293 | 10.529 | 1.00 | 35.21 |
| ATOM | 4413 | CB  | ARG | 570 | 52.659 | 1.173  | 10.256 | 1.00 | 36.77 |
| ATOM | 4414 | CG  | ARG | 570 | 51.282 | 1.370  | 9.653  | 1.00 | 43.11 |
| ATOM | 4415 | CD  | ARG | 570 | 51.203 | 2.690  | 8.926  | 1.00 | 49.24 |
| ATOM | 4416 | NE  | ARG | 570 | 52.154 | 2.775  | 7.815  | 1.00 | 55.77 |
| ATOM | 4418 | CZ  | ARG | 570 | 52.995 | 3.790  | 7.619  | 1.00 | 58.89 |
| ATOM | 4419 | NH1 | ARG | 570 | 53.016 | 4.820  | 8.463  | 1.00 | 61.61 |
| ATOM | 4422 | NH2 | ARG | 570 | 53.804 | 3.786  | 6.566  | 1.00 | 59.16 |
| ATOM | 4425 | C   | ARG | 570 | 52.992 | -1.063 | 9.220  | 1.00 | 35.16 |
| ATOM | 4426 | O   | ARG | 570 | 52.145 | -1.922 | 8.990  | 1.00 | 35.50 |
| ATOM | 4427 | N   | GLU | 571 | 53.971 | -0.760 | 8.383  | 1.00 | 36.29 |
| ATOM | 4429 | CA  | GLU | 571 | 54.111 | -1.400 | 7.089  | 1.00 | 37.51 |
| ATOM | 4430 | CB  | GLU | 571 | 55.219 | -0.701 | 6.308  | 1.00 | 41.27 |
| ATOM | 4431 | CG  | GLU | 571 | 54.945 | 0.778  | 6.110  | 1.00 | 49.88 |
| ATOM | 4432 | CD  | GLU | 571 | 56.087 | 1.516  | 5.436  | 1.00 | 57.58 |
| ATOM | 4433 | OE1 | GLU | 571 | 57.264 | 1.122  | 5.636  | 1.00 | 60.59 |
| ATOM | 4434 | OE2 | GLU | 571 | 55.804 | 2.504  | 4.714  | 1.00 | 61.14 |
| ATOM | 4435 | C   | GLU | 571 | 54.399 | -2.896 | 7.228  | 1.00 | 36.24 |
| ATOM | 4436 | O   | GLU | 571 | 53.889 | -3.716 | 6.459  | 1.00 | 34.22 |
| ATOM | 4437 | N   | TYR | 572 | 55.202 | -3.238 | 8.232  | 1.00 | 35.98 |
| ATOM | 4439 | CA  | TYR | 572 | 55.570 | -4.619 | 8.517  | 1.00 | 35.34 |
| ATOM | 4440 | CB  | TYR | 572 | 56.526 | -4.656 | 9.714  | 1.00 | 30.94 |
| ATOM | 4441 | CG  | TYR | 572 | 56.959 | -6.034 | 10.180 | 1.00 | 32.71 |
| ATOM | 4442 | CD1 | TYR | 572 | 58.009 | -6.714 | 9.547  | 1.00 | 32.33 |
| ATOM | 4443 | CE1 | TYR | 572 | 58.464 | -7.940 | 10.026 | 1.00 | 30.31 |
| ATOM | 4444 | CD2 | TYR | 572 | 56.369 | -6.626 | 11.303 | 1.00 | 33.43 |
| ATOM | 4445 | CE2 | TYR | 572 | 56.813 | -7.851 | 11.791 | 1.00 | 31.46 |
| ATOM | 4446 | CZ  | TYR | 572 | 57.864 | -8.502 | 11.148 | 1.00 | 33.99 |
| ATOM | 4447 | OH  | TYR | 572 | 58.311 | -9.706 | 11.640 | 1.00 | 36.30 |
| ATOM | 4449 | C   | TYR | 572 | 54.312 | -5.425 | 8.826  | 1.00 | 37.26 |
| ATOM | 4450 | O   | TYR | 572 | 54.121 | -6.530 | 8.314  | 1.00 | 36.91 |
| ATOM | 4451 | N   | LEU | 573 | 53.457 | -4.850 | 9.665  | 1.00 | 36.82 |
| ATOM | 4453 | CA  | LEU | 573 | 52.208 | -5.476 | 10.075 | 1.00 | 35.56 |
| ATOM | 4454 | CB  | LEU | 573 | 51.537 | -4.629 | 11.165 | 1.00 | 34.03 |
| ATOM | 4455 | CG  | LEU | 573 | 52.238 | -4.527 | 12.519 | 1.00 | 32.82 |
| ATOM | 4456 | CD1 | LEU | 573 | 51.621 | -3.423 | 13.377 | 1.00 | 28.95 |
| ATOM | 4457 | CD2 | LEU | 573 | 52.168 | -5.858 | 13.207 | 1.00 | 29.46 |
| ATOM | 4458 | C   | LEU | 573 | 51.237 | -5.658 | 8.915  | 1.00 | 34.56 |
| ATOM | 4459 | O   | LEU | 573 | 50.670 | -6.729 | 8.726  | 1.00 | 34.80 |
| ATOM | 4460 | N   | GLN | 574 | 51.030 | -4.602 | 8.150  | 1.00 | 37.10 |
| ATOM | 4462 | CA  | GLN | 574 | 50.101 | -4.666 | 7.031  | 1.00 | 41.15 |
| ATOM | 4463 | CB  | GLN | 574 | 49.875 | -3.278 | 6.457  | 1.00 | 41.63 |
| ATOM | 4464 | CG  | GLN | 574 | 49.089 | -2.375 | 7.366  | 1.00 | 43.13 |
| ATOM | 4465 | CD  | GLN | 574 | 49.063 | -0.959 | 6.860  | 1.00 | 47.77 |
| ATOM | 4466 | OE1 | GLN | 574 | 49.655 | -0.647 | 5.827  | 1.00 | 50.00 |
| ATOM | 4467 | NE2 | GLN | 574 | 48.378 | -0.086 | 7.582  | 1.00 | 49.67 |
| ATOM | 4470 | C   | GLN | 574 | 50.529 | -5.627 | 5.934  | 1.00 | 42.38 |
| ATOM | 4471 | O   | GLN | 574 | 49.685 | -6.284 | 5.318  | 1.00 | 44.56 |
| ATOM | 4472 | N   | ALA | 575 | 51.835 | -5.717 | 5.697  | 1.00 | 41.99 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4474 | CA  | ALA | 575 | 52.367 | -6.608  | 4.676  | 1.00 | 41.29 |
| ATOM | 4475 | CB  | ALA | 575 | 53.841 | -6.325  | 4.446  | 1.00 | 40.43 |
| ATOM | 4476 | C   | ALA | 575 | 52.186 | -8.058  | 5.066  | 1.00 | 41.42 |
| ATOM | 4477 | O   | ALA | 575 | 52.392 | -8.949  | 4.249  | 1.00 | 43.65 |
| ATOM | 4478 | N   | ARG | 576 | 51.815 | -8.294  | 6.319  | 1.00 | 42.56 |
| ATOM | 4480 | CA  | ARG | 576 | 51.642 | -9.646  | 6.824  | 1.00 | 42.51 |
| ATOM | 4481 | CB  | ARG | 576 | 52.676 | -9.910  | 7.920  | 1.00 | 40.14 |
| ATOM | 4482 | CG  | ARG | 576 | 54.100 | -9.896  | 7.377  | 1.00 | 40.32 |
| ATOM | 4483 | CD  | ARG | 576 | 55.172 | -9.836  | 8.460  | 1.00 | 40.78 |
| ATOM | 4484 | NE  | ARG | 576 | 56.513 | -9.783  | 7.874  | 1.00 | 42.13 |
| ATOM | 4486 | CZ  | ARG | 576 | 56.975 | -8.785  | 7.120  | 1.00 | 40.73 |
| ATOM | 4487 | NH1 | ARG | 576 | 56.215 | -7.732  | 6.851  | 1.00 | 39.21 |
| ATOM | 4490 | NH2 | ARG | 576 | 58.201 | -8.846  | 6.622  | 1.00 | 37.62 |
| ATOM | 4493 | C   | ARG | 576 | 50.242 | -9.931  | 7.326  | 1.00 | 44.48 |
| ATOM | 4494 | O   | ARG | 576 | 50.028 | -10.869 | 8.098  | 1.00 | 46.84 |
| ATOM | 4495 | N   | ARG | 577 | 49.275 | -9.146  | 6.866  | 1.00 | 46.26 |
| ATOM | 4497 | CA  | ARG | 577 | 47.893 | -9.344  | 7.292  | 1.00 | 46.89 |
| ATOM | 4498 | CB  | ARG | 577 | 47.027 | -8.170  | 6.845  | 1.00 | 46.16 |
| ATOM | 4499 | CG  | ARG | 577 | 47.189 | -6.939  | 7.696  | 1.00 | 44.93 |
| ATOM | 4500 | CD  | ARG | 577 | 46.463 | -5.766  | 7.080  | 1.00 | 44.60 |
| ATOM | 4501 | NE  | ARG | 577 | 46.284 | -4.683  | 8.039  | 1.00 | 45.05 |
| ATOM | 4503 | CZ  | ARG | 577 | 45.612 | -3.565  | 7.793  | 1.00 | 45.95 |
| ATOM | 4504 | NH1 | ARG | 577 | 45.052 | -3.372  | 6.606  | 1.00 | 47.39 |
| ATOM | 4507 | NH2 | ARG | 577 | 45.466 | -2.655  | 8.749  | 1.00 | 45.49 |
| ATOM | 4510 | C   | ARG | 577 | 47.334 | -10.649 | 6.740  | 1.00 | 46.60 |
| ATOM | 4511 | O   | ARG | 577 | 47.478 | -10.933 | 5.551  | 1.00 | 47.15 |
| ATOM | 4512 | N   | GLN | 594 | 53.312 | -14.007 | 7.967  | 1.00 | 63.97 |
| ATOM | 4514 | CA  | GLN | 594 | 52.110 | -14.068 | 8.799  | 1.00 | 63.06 |
| ATOM | 4515 | CB  | GLN | 594 | 51.175 | -15.183 | 8.319  | 1.00 | 64.16 |
| ATOM | 4516 | C   | GLN | 594 | 52.501 | -14.278 | 10.258 | 1.00 | 61.68 |
| ATOM | 4517 | O   | GLN | 594 | 53.101 | -15.292 | 10.619 | 1.00 | 60.95 |
| ATOM | 4518 | N   | LEU | 595 | 52.140 | -13.313 | 11.092 | 1.00 | 58.58 |
| ATOM | 4520 | CA  | LEU | 595 | 52.470 | -13.335 | 12.505 | 1.00 | 55.58 |
| ATOM | 4521 | CB  | LEU | 595 | 52.619 | -11.902 | 13.020 | 1.00 | 54.05 |
| ATOM | 4522 | CG  | LEU | 595 | 53.570 | -11.074 | 12.153 | 1.00 | 56.23 |
| ATOM | 4523 | CD1 | LEU | 595 | 53.496 | -9.609  | 12.524 | 1.00 | 58.84 |
| ATOM | 4524 | CD2 | LEU | 595 | 54.977 | -11.596 | 12.301 | 1.00 | 55.93 |
| ATOM | 4525 | C   | LEU | 595 | 51.480 | -14.093 | 13.372 | 1.00 | 53.77 |
| ATOM | 4526 | O   | LEU | 595 | 50.276 | -14.046 | 13.139 | 1.00 | 54.31 |
| ATOM | 4527 | N   | SER | 596 | 52.012 | -14.780 | 14.377 | 1.00 | 51.04 |
| ATOM | 4529 | CA  | SER | 596 | 51.206 | -15.541 | 15.316 | 1.00 | 48.97 |
| ATOM | 4530 | CB  | SER | 596 | 52.004 | -16.737 | 15.834 | 1.00 | 48.89 |
| ATOM | 4531 | OG  | SER | 596 | 52.945 | -16.345 | 16.820 | 1.00 | 48.59 |
| ATOM | 4533 | C   | SER | 596 | 50.853 | -14.641 | 16.488 | 1.00 | 47.56 |
| ATOM | 4534 | O   | SER | 596 | 51.470 | -13.590 | 16.676 | 1.00 | 46.71 |
| ATOM | 4535 | N   | SER | 597 | 49.888 | -15.070 | 17.292 | 1.00 | 47.11 |
| ATOM | 4537 | CA  | SER | 597 | 49.462 | -14.315 | 18.461 | 1.00 | 47.88 |
| ATOM | 4538 | CB  | SER | 597 | 48.386 | -15.084 | 19.229 | 1.00 | 50.66 |
| ATOM | 4539 | OG  | SER | 597 | 47.574 | -15.839 | 18.343 | 1.00 | 57.08 |
| ATOM | 4541 | C   | SER | 597 | 50.666 | -14.068 | 19.372 | 1.00 | 46.03 |
| ATOM | 4542 | O   | SER | 597 | 50.735 | -13.045 | 20.047 | 1.00 | 46.49 |
| ATOM | 4543 | N   | LYS | 598 | 51.607 | -15.007 | 19.399 | 1.00 | 46.08 |
| ATOM | 4545 | CA  | LYS | 598 | 52.798 | -14.844 | 20.229 | 1.00 | 46.33 |
| ATOM | 4546 | CB  | LYS | 598 | 53.558 | -16.163 | 20.384 | 1.00 | 46.67 |

|      |      |     |     |     |        |         |        |      |            |
|------|------|-----|-----|-----|--------|---------|--------|------|------------|
| ATOM | 4547 | CG  | LYS | 598 | 54.449 | -16.224 | 21.623 | 1.00 | 49.61      |
| ATOM | 4548 | CD  | LYS | 598 | 55.240 | -17.539 | 21.668 | 1.00 | 53.69      |
| ATOM | 4549 | CE  | LYS | 598 | 55.899 | -17.797 | 23.026 | 1.00 | 53.15      |
| ATOM | 4550 | NZ  | LYS | 598 | 54.891 | -18.076 | 24.093 | 1.00 | 52.02      |
| ATOM | 4554 | C   | LYS | 598 | 53.706 | -13.790 | 19.599 | 1.00 | 45.43      |
| ATOM | 4555 | O   | LYS | 598 | 54.292 | -12.968 | 20.311 | 1.00 | 44.18      |
| ATOM | 4556 | N   | ASP | 599 | 53.780 | -13.804 | 18.264 | 1.00 | 44.16      |
| ATOM | 4558 | CA  | ASP | 599 | 54.598 | -12.851 | 17.513 | 1.00 | 43.46      |
| ATOM | 4559 | CB  | ASP | 599 | 54.523 | -13.098 | 16.001 | 1.00 | 44.83      |
| ATOM | 4560 | CG  | ASP | 599 | 55.288 | -14.336 | 15.560 | 1.00 | 48.24      |
| ATOM | 4561 | OD1 | ASP | 599 | 56.228 | -14.754 | 16.260 | 1.00 | 52.90      |
| ATOM | 4562 | OD2 | ASP | 599 | 54.958 | -14.894 | 14.493 | 1.00 | 51.43      |
| ATOM | 4563 | C   | ASP | 599 | 54.120 | -11.437 | 17.796 | 1.00 | 42.71      |
| ATOM | 4564 | O   | ASP | 599 | 54.937 | -10.550 | 18.059 | 1.00 | 45.00      |
| ATOM | 4565 | N   | LEU | 600 | 52.803 | -11.235 | 17.776 | 1.00 | 37.69      |
| ATOM | 4567 | CA  | LEU | 600 | 52.246 | -9.918  | 18.030 | 1.00 | 34.03      |
| ATOM | 4568 | CB  | LEU | 600 | 50.747 | -9.882  | 17.747 | 1.00 | 34.06      |
| ATOM | 4569 | CG  | LEU | 600 | 50.332 | -10.068 | 16.281 | 1.00 | 33.13      |
| ATOM | 4570 | CD1 | LEU | 600 | 48.814 | -9.992  | 16.190 | 1.00 | 37.38      |
| ATOM | 4571 | CD2 | LEU | 600 | 50.974 | -9.012  | 15.373 | 1.00 | 25.63      |
| ATOM | 4572 | C   | LEU | 600 | 52.537 | -9.452  | 19.439 | 1.00 | 34.58      |
| ATOM | 4573 | O   | LEU | 600 | 52.910 | -8.294  | 19.636 | 1.00 | 33.18      |
| ATOM | 4574 | N   | VAL | 601 | 52.415 | -10.348 | 20.419 | 1.00 | 34.24      |
| ATOM | 4576 | CA  | VAL | 601 | 52.692 | -9.969  | 21.808 | 1.00 | 35.80      |
| ATOM | 4577 | CB  | VAL | 601 | 52.214 | -11.036 | 22.827 | 1.00 | 37.50      |
| ATOM | 4578 | CG1 | VAL | 601 | 52.331 | -10.483 | 24.252 | 1.00 | 38.08      |
| ATOM | 4579 | CG2 | VAL | 601 | 50.766 | -11.409 | 22.560 | 1.00 | 40.77      |
| ATOM | 4580 | C   | VAL | 601 | 54.198 | -9.741  | 21.982 | 1.00 | 35.04      |
| ATOM | 4581 | O   | VAL | 601 | 54.634 | -8.856  | 22.731 | 1.00 | 34.33      |
| ATOM | 4582 | N   | SER | 602 | 54.981 | -10.531 | 21.262 | 1.00 | 32.58      |
| ATOM | 4584 | CA  | SER | 602 | 56.421 | -10.421 | 21.307 | 1.00 | 36.01      |
| ATOM | 4585 | CB  | SER | 602 | 57.045 | -11.504 | 20.439 | 1.00 | 38.43      |
| ATOM | 4586 | OG  | SER | 602 | 58.453 | -11.387 | 20.419 | 1.00 | 43.36      |
| ATOM | 4588 | C   | SER | 602 | 56.809 | -9.038  | 20.800 | 1.00 | 35.21      |
| ATOM | 4589 | O   | SER | 602 | 57.651 | -8.363  | 21.394 | 1.00 | 35.03      |
| ATOM | 4590 | N   | CYS | 603 | 56.183 | -8.614  | 19.707 | 1.00 | 34.15      |
| ATOM | 4592 | CA  | CYS | 603 | 56.438 | -7.294  | 19.141 | 1.00 | 34.04      |
| ATOM | 4593 | CB  | CYS | 603 | 55.543 | -7.055  | 17.925 | 1.00 | 33.45      |
| ATOM | 4594 | SG  | CYS | 603 | 55.653 | -5.423  | 17.229 | 0.50 | 32.19 PRT1 |
| ATOM | 4595 | C   | CYS | 603 | 56.198 | -6.211  | 20.191 | 1.00 | 32.79      |
| ATOM | 4596 | O   | CYS | 603 | 57.023 | -5.316  | 20.362 | 1.00 | 33.36      |
| ATOM | 4597 | N   | ALA | 604 | 55.088 | -6.321  | 20.917 | 1.00 | 31.31      |
| ATOM | 4599 | CA  | ALA | 604 | 54.743 | -5.358  | 21.965 | 1.00 | 32.36      |
| ATOM | 4600 | CB  | ALA | 604 | 53.321 | -5.610  | 22.481 | 1.00 | 32.01      |
| ATOM | 4601 | C   | ALA | 604 | 55.741 | -5.394  | 23.128 | 1.00 | 32.83      |
| ATOM | 4602 | O   | ALA | 604 | 56.050 | -4.358  | 23.727 | 1.00 | 30.89      |
| ATOM | 4603 | N   | TYR | 605 | 56.212 | -6.592  | 23.465 | 1.00 | 32.95      |
| ATOM | 4605 | CA  | TYR | 605 | 57.189 | -6.758  | 24.539 | 1.00 | 33.34      |
| ATOM | 4606 | CB  | TYR | 605 | 57.500 | -8.236  | 24.737 | 1.00 | 32.58      |
| ATOM | 4607 | CG  | TYR | 605 | 58.640 | -8.495  | 25.690 | 1.00 | 32.51      |
| ATOM | 4608 | CD1 | TYR | 605 | 58.511 | -8.236  | 27.053 | 1.00 | 33.50      |
| ATOM | 4609 | CE1 | TYR | 605 | 59.556 | -8.507  | 27.943 | 1.00 | 37.08      |
| ATOM | 4610 | CD2 | TYR | 605 | 59.841 | -9.026  | 25.230 | 1.00 | 34.22      |
| ATOM | 4611 | CE2 | TYR | 605 | 60.896 | -9.300  | 26.109 | 1.00 | 36.64      |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4612 | CZ  | TYR | 605 | 60.746 | -9.042 | 27.464 | 1.00 | 37.56 |
| ATOM | 4613 | OH  | TYR | 605 | 61.776 | -9.342 | 28.336 | 1.00 | 38.08 |
| ATOM | 4615 | C   | TYR | 605 | 58.480 | -6.006 | 24.191 | 1.00 | 32.42 |
| ATOM | 4616 | O   | TYR | 605 | 58.975 | -5.203 | 24.991 | 1.00 | 33.34 |
| ATOM | 4617 | N   | GLN | 606 | 58.997 | -6.267 | 22.989 | 1.00 | 30.61 |
| ATOM | 4619 | CA  | GLN | 606 | 60.218 | -5.643 | 22.474 | 1.00 | 31.12 |
| ATOM | 4620 | CB  | GLN | 606 | 60.499 | -6.143 | 21.058 | 1.00 | 30.57 |
| ATOM | 4621 | CG  | GLN | 606 | 61.044 | -7.568 | 21.008 | 1.00 | 33.90 |
| ATOM | 4622 | CD  | GLN | 606 | 61.240 | -8.080 | 19.593 | 1.00 | 32.17 |
| ATOM | 4623 | OE1 | GLN | 606 | 62.155 | -7.652 | 18.883 | 1.00 | 32.55 |
| ATOM | 4624 | NE2 | GLN | 606 | 60.374 | -8.998 | 19.171 | 1.00 | 33.10 |
| ATOM | 4627 | C   | GLN | 606 | 60.157 | -4.114 | 22.487 | 1.00 | 31.69 |
| ATOM | 4628 | O   | GLN | 606 | 61.111 | -3.453 | 22.910 | 1.00 | 31.18 |
| ATOM | 4629 | N   | VAL | 607 | 59.035 | -3.564 | 22.020 | 1.00 | 29.50 |
| ATOM | 4631 | CA  | VAL | 607 | 58.816 | -2.122 | 22.000 | 1.00 | 27.54 |
| ATOM | 4632 | CB  | VAL | 607 | 57.454 | -1.751 | 21.306 | 1.00 | 26.79 |
| ATOM | 4633 | CG1 | VAL | 607 | 57.131 | -0.291 | 21.516 | 1.00 | 24.80 |
| ATOM | 4634 | CG2 | VAL | 607 | 57.505 | -2.050 | 19.815 | 1.00 | 22.95 |
| ATOM | 4635 | C   | VAL | 607 | 58.827 | -1.576 | 23.432 | 1.00 | 28.30 |
| ATOM | 4636 | O   | VAL | 607 | 59.469 | -0.548 | 23.705 | 1.00 | 28.32 |
| ATOM | 4637 | N   | ALA | 608 | 58.110 | -2.247 | 24.340 | 1.00 | 27.21 |
| ATOM | 4639 | CA  | ALA | 608 | 58.061 | -1.805 | 25.735 | 1.00 | 26.54 |
| ATOM | 4640 | CB  | ALA | 608 | 57.070 | -2.649 | 26.550 | 1.00 | 26.70 |
| ATOM | 4641 | C   | ALA | 608 | 59.457 | -1.850 | 26.368 | 1.00 | 25.97 |
| ATOM | 4642 | O   | ALA | 608 | 59.802 | -0.993 | 27.183 | 1.00 | 25.88 |
| ATOM | 4643 | N   | ARG | 609 | 60.250 | -2.848 | 25.994 | 1.00 | 26.02 |
| ATOM | 4645 | CA  | ARG | 609 | 61.606 | -2.977 | 26.512 | 1.00 | 30.44 |
| ATOM | 4646 | CB  | ARG | 609 | 62.234 | -4.285 | 26.058 | 1.00 | 34.09 |
| ATOM | 4647 | CG  | ARG | 609 | 61.642 | -5.516 | 26.682 | 1.00 | 39.24 |
| ATOM | 4648 | CD  | ARG | 609 | 62.659 | -6.615 | 26.615 | 1.00 | 42.75 |
| ATOM | 4649 | NE  | ARG | 609 | 63.405 | -6.704 | 27.860 | 1.00 | 45.52 |
| ATOM | 4651 | CZ  | ARG | 609 | 64.525 | -7.405 | 28.019 | 1.00 | 46.24 |
| ATOM | 4652 | NH1 | ARG | 609 | 65.055 | -8.079 | 27.001 | 1.00 | 41.48 |
| ATOM | 4655 | NH2 | ARG | 609 | 65.079 | -7.482 | 29.225 | 1.00 | 47.49 |
| ATOM | 4658 | C   | ARG | 609 | 62.478 | -1.829 | 26.015 | 1.00 | 34.20 |
| ATOM | 4659 | O   | ARG | 609 | 63.265 | -1.255 | 26.788 | 1.00 | 35.24 |
| ATOM | 4660 | N   | GLY | 610 | 62.368 | -1.528 | 24.717 | 1.00 | 33.25 |
| ATOM | 4662 | CA  | GLY | 610 | 63.130 | -0.439 | 24.138 | 1.00 | 29.57 |
| ATOM | 4663 | C   | GLY | 610 | 62.802 | 0.814  | 24.908 | 1.00 | 29.31 |
| ATOM | 4664 | O   | GLY | 610 | 63.695 | 1.543  | 25.335 | 1.00 | 27.46 |
| ATOM | 4665 | N   | MET | 611 | 61.507 | 1.020  | 25.147 | 1.00 | 31.07 |
| ATOM | 4667 | CA  | MET | 611 | 61.016 | 2.178  | 25.889 | 1.00 | 30.09 |
| ATOM | 4668 | CB  | MET | 611 | 59.493 | 2.280  | 25.782 | 1.00 | 29.51 |
| ATOM | 4669 | CG  | MET | 611 | 58.997 | 2.655  | 24.404 | 1.00 | 28.21 |
| ATOM | 4670 | SD  | MET | 611 | 59.760 | 4.175  | 23.787 | 1.00 | 29.00 |
| ATOM | 4671 | CE  | MET | 611 | 59.350 | 5.335  | 25.039 | 1.00 | 25.91 |
| ATOM | 4672 | C   | MET | 611 | 61.439 | 2.189  | 27.361 | 1.00 | 30.47 |
| ATOM | 4673 | O   | MET | 611 | 61.734 | 3.242  | 27.919 | 1.00 | 29.43 |
| ATOM | 4674 | N   | GLU | 612 | 61.429 | 1.031  | 28.002 | 1.00 | 31.97 |
| ATOM | 4676 | CA  | GLU | 612 | 61.836 | 0.947  | 29.402 | 1.00 | 35.34 |
| ATOM | 4677 | CB  | GLU | 612 | 61.707 | -0.490 | 29.904 | 1.00 | 36.17 |
| ATOM | 4678 | CG  | GLU | 612 | 62.305 | -0.729 | 31.278 | 1.00 | 34.87 |
| ATOM | 4679 | CD  | GLU | 612 | 62.259 | -2.185 | 31.705 | 1.00 | 32.68 |
| ATOM | 4680 | OE1 | GLU | 612 | 62.641 | -3.070 | 30.904 | 1.00 | 35.01 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4681 | OE2 | GLU | 612 | 61.848 | -2.443 | 32.858 | 1.00 | 36.56 |
| ATOM | 4682 | C   | GLU | 612 | 63.296 | 1.425  | 29.490 | 1.00 | 35.26 |
| ATOM | 4683 | O   | GLU | 612 | 63.677 | 2.162  | 30.417 | 1.00 | 31.21 |
| ATOM | 4684 | N   | TYR | 613 | 64.092 | 1.040  | 28.491 | 1.00 | 36.10 |
| ATOM | 4686 | CA  | TYR | 613 | 65.491 | 1.458  | 28.440 | 1.00 | 34.76 |
| ATOM | 4687 | CB  | TYR | 613 | 66.249 | 0.788  | 27.301 | 1.00 | 31.15 |
| ATOM | 4688 | CG  | TYR | 613 | 67.700 | 1.195  | 27.284 | 1.00 | 34.28 |
| ATOM | 4689 | CD1 | TYR | 613 | 68.600 | 0.654  | 28.207 | 1.00 | 36.50 |
| ATOM | 4690 | CE1 | TYR | 613 | 69.949 | 1.035  | 28.219 | 1.00 | 38.20 |
| ATOM | 4691 | CD2 | TYR | 613 | 68.179 | 2.135  | 26.366 | 1.00 | 32.99 |
| ATOM | 4692 | CE2 | TYR | 613 | 69.520 | 2.526  | 26.372 | 1.00 | 33.32 |
| ATOM | 4693 | CZ  | TYR | 613 | 70.399 | 1.968  | 27.302 | 1.00 | 36.59 |
| ATOM | 4694 | OH  | TYR | 613 | 71.721 | 2.340  | 27.333 | 1.00 | 35.73 |
| ATOM | 4696 | C   | TYR | 613 | 65.583 | 2.970  | 28.273 | 1.00 | 34.03 |
| ATOM | 4697 | O   | TYR | 613 | 66.231 | 3.643  | 29.075 | 1.00 | 35.26 |
| ATOM | 4698 | N   | LEU | 614 | 64.916 | 3.503  | 27.250 | 1.00 | 31.78 |
| ATOM | 4700 | CA  | LEU | 614 | 64.945 | 4.937  | 26.998 | 1.00 | 29.50 |
| ATOM | 4701 | CB  | LEU | 614 | 64.095 | 5.297  | 25.775 | 1.00 | 28.26 |
| ATOM | 4702 | CG  | LEU | 614 | 64.564 | 4.742  | 24.422 | 1.00 | 31.29 |
| ATOM | 4703 | CD1 | LEU | 614 | 63.564 | 5.089  | 23.321 | 1.00 | 28.09 |
| ATOM | 4704 | CD2 | LEU | 614 | 65.951 | 5.282  | 24.079 | 1.00 | 29.52 |
| ATOM | 4705 | C   | LEU | 614 | 64.489 | 5.715  | 28.224 | 1.00 | 32.49 |
| ATOM | 4706 | O   | LEU | 614 | 65.108 | 6.717  | 28.598 | 1.00 | 31.73 |
| ATOM | 4707 | N   | ALA | 615 | 63.431 | 5.232  | 28.872 | 1.00 | 33.06 |
| ATOM | 4709 | CA  | ALA | 615 | 62.906 | 5.870  | 30.070 | 1.00 | 35.16 |
| ATOM | 4710 | CB  | ALA | 615 | 61.598 | 5.192  | 30.511 | 1.00 | 36.64 |
| ATOM | 4711 | C   | ALA | 615 | 63.942 | 5.838  | 31.202 | 1.00 | 35.36 |
| ATOM | 4712 | O   | ALA | 615 | 64.065 | 6.805  | 31.952 | 1.00 | 36.80 |
| ATOM | 4713 | N   | SER | 616 | 64.690 | 4.739  | 31.315 | 1.00 | 35.91 |
| ATOM | 4715 | CA  | SER | 616 | 65.716 | 4.621  | 32.354 | 1.00 | 35.78 |
| ATOM | 4716 | CB  | SER | 616 | 66.287 | 3.199  | 32.424 | 1.00 | 32.52 |
| ATOM | 4717 | OG  | SER | 616 | 67.133 | 2.899  | 31.324 | 1.00 | 29.64 |
| ATOM | 4719 | C   | SER | 616 | 66.832 | 5.623  | 32.063 | 1.00 | 37.48 |
| ATOM | 4720 | O   | SER | 616 | 67.556 | 6.048  | 32.967 | 1.00 | 38.76 |
| ATOM | 4721 | N   | LYS | 617 | 66.971 | 5.980  | 30.790 | 1.00 | 34.74 |
| ATOM | 4723 | CA  | LYS | 617 | 67.973 | 6.931  | 30.357 | 1.00 | 32.44 |
| ATOM | 4724 | CB  | LYS | 617 | 68.540 | 6.520  | 28.998 | 1.00 | 32.94 |
| ATOM | 4725 | CG  | LYS | 617 | 69.330 | 5.232  | 29.041 | 1.00 | 32.64 |
| ATOM | 4726 | CD  | LYS | 617 | 70.539 | 5.402  | 29.933 | 1.00 | 38.45 |
| ATOM | 4727 | CE  | LYS | 617 | 71.252 | 4.091  | 30.139 | 1.00 | 40.84 |
| ATOM | 4728 | NZ  | LYS | 617 | 72.552 | 4.306  | 30.812 | 1.00 | 46.49 |
| ATOM | 4732 | C   | LYS | 617 | 67.376 | 8.325  | 30.281 | 1.00 | 33.29 |
| ATOM | 4733 | O   | LYS | 617 | 67.909 | 9.188  | 29.598 | 1.00 | 33.95 |
| ATOM | 4734 | N   | LYS | 618 | 66.245 | 8.528  | 30.952 | 1.00 | 34.87 |
| ATOM | 4736 | CA  | LYS | 618 | 65.569 | 9.822  | 30.997 | 1.00 | 35.44 |
| ATOM | 4737 | CB  | LYS | 618 | 66.512 | 10.868 | 31.581 | 1.00 | 40.44 |
| ATOM | 4738 | CG  | LYS | 618 | 67.192 | 10.446 | 32.877 | 1.00 | 48.19 |
| ATOM | 4739 | CD  | LYS | 618 | 66.234 | 10.363 | 34.037 | 1.00 | 55.47 |
| ATOM | 4740 | CE  | LYS | 618 | 66.962 | 9.939  | 35.310 | 1.00 | 61.56 |
| ATOM | 4741 | NZ  | LYS | 618 | 66.070 | 10.032 | 36.514 | 1.00 | 68.82 |
| ATOM | 4745 | C   | LYS | 618 | 65.015 | 10.327 | 29.663 | 1.00 | 35.62 |
| ATOM | 4746 | O   | LYS | 618 | 64.557 | 11.463 | 29.569 | 1.00 | 36.44 |
| ATOM | 4747 | N   | CYS | 619 | 65.006 | 9.472  | 28.647 | 1.00 | 34.24 |
| ATOM | 4749 | CA  | CYS | 619 | 64.525 | 9.848  | 27.323 | 1.00 | 31.62 |



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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4750 | CB  | CYS | 619 | 65.279 | 9.033  | 26.263 | 1.00 | 31.17 |
| ATOM | 4751 | SG  | CYS | 619 | 64.816 | 9.306  | 24.541 | 1.00 | 30.02 |
| ATOM | 4752 | C   | CYS | 619 | 63.004 | 9.701  | 27.149 | 1.00 | 30.45 |
| ATOM | 4753 | O   | CYS | 619 | 62.418 | 8.649  | 27.388 | 1.00 | 29.24 |
| ATOM | 4754 | N   | ILE | 620 | 62.359 | 10.798 | 26.800 | 1.00 | 30.14 |
| ATOM | 4756 | CA  | ILE | 620 | 60.935 | 10.822 | 26.542 | 1.00 | 31.76 |
| ATOM | 4757 | CB  | ILE | 620 | 60.268 | 12.040 | 27.193 | 1.00 | 31.26 |
| ATOM | 4758 | CG2 | ILE | 620 | 58.799 | 12.116 | 26.774 | 1.00 | 31.66 |
| ATOM | 4759 | CG1 | ILE | 620 | 60.392 | 11.957 | 28.712 | 1.00 | 29.71 |
| ATOM | 4760 | CD1 | ILE | 620 | 60.016 | 13.236 | 29.396 | 1.00 | 27.40 |
| ATOM | 4761 | C   | ILE | 620 | 60.864 | 10.961 | 25.023 | 1.00 | 31.86 |
| ATOM | 4762 | O   | ILE | 620 | 61.384 | 11.920 | 24.465 | 1.00 | 32.70 |
| ATOM | 4763 | N   | HIS | 621 | 60.249 | 9.986  | 24.366 | 1.00 | 31.70 |
| ATOM | 4765 | CA  | HIS | 621 | 60.133 | 9.973  | 22.906 | 1.00 | 32.12 |
| ATOM | 4766 | CB  | HIS | 621 | 59.708 | 8.578  | 22.430 | 1.00 | 29.61 |
| ATOM | 4767 | CG  | HIS | 621 | 59.903 | 8.344  | 20.961 | 1.00 | 28.62 |
| ATOM | 4768 | CD2 | HIS | 621 | 60.511 | 7.336  | 20.300 | 1.00 | 27.49 |
| ATOM | 4769 | ND1 | HIS | 621 | 59.373 | 9.168  | 19.988 | 1.00 | 30.08 |
| ATOM | 4771 | CE1 | HIS | 621 | 59.637 | 8.669  | 18.795 | 1.00 | 25.00 |
| ATOM | 4772 | NE2 | HIS | 621 | 60.325 | 7.554  | 18.956 | 1.00 | 26.55 |
| ATOM | 4774 | C   | HIS | 621 | 59.194 | 11.026 | 22.321 | 1.00 | 34.51 |
| ATOM | 4775 | O   | HIS | 621 | 59.466 | 11.570 | 21.251 | 1.00 | 36.79 |
| ATOM | 4776 | N   | ARG | 622 | 58.048 | 11.248 | 22.960 | 1.00 | 35.26 |
| ATOM | 4778 | CA  | ARG | 622 | 57.068 | 12.239 | 22.490 | 1.00 | 34.68 |
| ATOM | 4779 | CB  | ARG | 622 | 57.705 | 13.628 | 22.370 | 1.00 | 33.43 |
| ATOM | 4780 | CG  | ARG | 622 | 58.285 | 14.135 | 23.674 | 1.00 | 31.52 |
| ATOM | 4781 | CD  | ARG | 622 | 58.781 | 15.563 | 23.570 | 0.50 | 27.82 |
| ATOM | 4782 | NE  | ARG | 622 | 59.216 | 16.050 | 24.876 | 0.50 | 28.82 |
| ATOM | 4784 | CZ  | ARG | 622 | 60.362 | 15.715 | 25.463 | 0.50 | 30.41 |
| ATOM | 4785 | NH1 | ARG | 622 | 61.215 | 14.891 | 24.860 | 0.50 | 31.15 |
| ATOM | 4788 | NH2 | ARG | 622 | 60.640 | 16.168 | 26.680 | 0.50 | 30.83 |
| ATOM | 4791 | C   | ARG | 622 | 56.283 | 11.891 | 21.213 | 1.00 | 34.71 |
| ATOM | 4792 | O   | ARG | 622 | 55.289 | 12.544 | 20.912 | 1.00 | 35.58 |
| ATOM | 4793 | N   | ASP | 623 | 56.719 | 10.884 | 20.459 | 1.00 | 34.90 |
| ATOM | 4795 | CA  | ASP | 623 | 55.986 | 10.468 | 19.261 | 1.00 | 34.30 |
| ATOM | 4796 | CB  | ASP | 623 | 56.443 | 11.212 | 17.994 | 1.00 | 36.76 |
| ATOM | 4797 | CG  | ASP | 623 | 55.535 | 10.918 | 16.772 | 1.00 | 43.35 |
| ATOM | 4798 | OD1 | ASP | 623 | 55.980 | 11.131 | 15.624 | 1.00 | 47.64 |
| ATOM | 4799 | OD2 | ASP | 623 | 54.376 | 10.469 | 16.954 | 1.00 | 43.30 |
| ATOM | 4800 | C   | ASP | 623 | 56.094 | 8.967  | 19.051 | 1.00 | 32.24 |
| ATOM | 4801 | O   | ASP | 623 | 56.406 | 8.494  | 17.957 | 1.00 | 31.19 |
| ATOM | 4802 | N   | LEU | 624 | 55.895 | 8.209  | 20.118 | 1.00 | 32.27 |
| ATOM | 4804 | CA  | LEU | 624 | 55.964 | 6.759  | 20.005 | 1.00 | 33.18 |
| ATOM | 4805 | CB  | LEU | 624 | 56.013 | 6.118  | 21.390 | 1.00 | 31.16 |
| ATOM | 4806 | CG  | LEU | 624 | 56.019 | 4.592  | 21.452 | 1.00 | 32.74 |
| ATOM | 4807 | CD1 | LEU | 624 | 57.257 | 4.020  | 20.765 | 1.00 | 30.64 |
| ATOM | 4808 | CD2 | LEU | 624 | 55.974 | 4.177  | 22.904 | 1.00 | 34.51 |
| ATOM | 4809 | C   | LEU | 624 | 54.738 | 6.274  | 19.217 | 1.00 | 35.18 |
| ATOM | 4810 | O   | LEU | 624 | 53.589 | 6.511  | 19.612 | 1.00 | 35.72 |
| ATOM | 4811 | N   | ALA | 625 | 54.997 | 5.632  | 18.084 | 1.00 | 32.37 |
| ATOM | 4813 | CA  | ALA | 625 | 53.946 | 5.113  | 17.223 | 1.00 | 30.60 |
| ATOM | 4814 | CB  | ALA | 625 | 53.447 | 6.205  | 16.298 | 1.00 | 25.26 |
| ATOM | 4815 | C   | ALA | 625 | 54.618 | 4.020  | 16.427 | 1.00 | 29.87 |
| ATOM | 4816 | O   | ALA | 625 | 55.839 | 3.978  | 16.378 | 1.00 | 32.01 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4817 | N   | ALA | 626 | 53.834 | 3.163  | 15.779 | 1.00 | 30.12 |
| ATOM | 4819 | CA  | ALA | 626 | 54.373 | 2.057  | 14.978 | 1.00 | 29.62 |
| ATOM | 4820 | CB  | ALA | 626 | 53.231 | 1.159  | 14.441 | 1.00 | 27.11 |
| ATOM | 4821 | C   | ALA | 626 | 55.255 | 2.552  | 13.838 | 1.00 | 26.57 |
| ATOM | 4822 | O   | ALA | 626 | 56.193 | 1.871  | 13.434 | 1.00 | 26.29 |
| ATOM | 4823 | N   | ARG | 627 | 54.935 | 3.730  | 13.317 | 1.00 | 26.74 |
| ATOM | 4825 | CA  | ARG | 627 | 55.706 | 4.352  | 12.244 | 1.00 | 28.73 |
| ATOM | 4826 | CB  | ARG | 627 | 55.056 | 5.671  | 11.827 | 1.00 | 29.62 |
| ATOM | 4827 | CG  | ARG | 627 | 54.894 | 6.659  | 12.972 | 1.00 | 31.84 |
| ATOM | 4828 | CD  | ARG | 627 | 54.435 | 8.032  | 12.485 | 1.00 | 38.54 |
| ATOM | 4829 | NE  | ARG | 627 | 53.987 | 8.878  | 13.590 | 1.00 | 38.59 |
| ATOM | 4831 | CZ  | ARG | 627 | 52.745 | 8.879  | 14.064 | 1.00 | 39.55 |
| ATOM | 4832 | NH1 | ARG | 627 | 51.822 | 8.094  | 13.525 | 1.00 | 35.96 |
| ATOM | 4835 | NH2 | ARG | 627 | 52.447 | 9.604  | 15.127 | 1.00 | 41.05 |
| ATOM | 4838 | C   | ARG | 627 | 57.151 | 4.632  | 12.676 | 1.00 | 30.79 |
| ATOM | 4839 | O   | ARG | 627 | 58.058 | 4.687  | 11.838 | 1.00 | 30.16 |
| ATOM | 4840 | N   | ASN | 628 | 57.347 | 4.822  | 13.985 | 1.00 | 30.31 |
| ATOM | 4842 | CA  | ASN | 628 | 58.661 | 5.109  | 14.550 | 1.00 | 28.50 |
| ATOM | 4843 | CB  | ASN | 628 | 58.587 | 6.257  | 15.549 | 1.00 | 27.84 |
| ATOM | 4844 | CG  | ASN | 628 | 58.369 | 7.571  | 14.868 | 1.00 | 31.41 |
| ATOM | 4845 | OD1 | ASN | 628 | 58.893 | 7.796  | 13.782 | 1.00 | 33.45 |
| ATOM | 4846 | ND2 | ASN | 628 | 57.551 | 8.429  | 15.460 | 1.00 | 28.53 |
| ATOM | 4849 | C   | ASN | 628 | 59.352 | 3.919  | 15.169 | 1.00 | 28.10 |
| ATOM | 4850 | O   | ASN | 628 | 60.232 | 4.076  | 16.021 | 1.00 | 28.64 |
| ATOM | 4851 | N   | VAL | 629 | 58.887 | 2.733  | 14.803 | 1.00 | 27.79 |
| ATOM | 4853 | CA  | VAL | 629 | 59.484 | 1.482  | 15.253 | 1.00 | 28.30 |
| ATOM | 4854 | CB  | VAL | 629 | 58.475 | 0.577  | 15.983 | 1.00 | 25.38 |
| ATOM | 4855 | CG1 | VAL | 629 | 59.118 | -0.753 | 16.284 | 1.00 | 23.07 |
| ATOM | 4856 | CG2 | VAL | 629 | 57.980 | 1.246  | 17.265 | 1.00 | 22.48 |
| ATOM | 4857 | C   | VAL | 629 | 59.925 | 0.810  | 13.949 | 1.00 | 28.69 |
| ATOM | 4858 | O   | VAL | 629 | 59.114 | 0.616  | 13.043 | 1.00 | 27.07 |
| ATOM | 4859 | N   | LEU | 630 | 61.220 | 0.542  | 13.823 | 1.00 | 29.54 |
| ATOM | 4861 | CA  | LEU | 630 | 61.749 | -0.081 | 12.616 | 1.00 | 30.17 |
| ATOM | 4862 | CB  | LEU | 630 | 62.999 | 0.659  | 12.142 | 1.00 | 29.62 |
| ATOM | 4863 | CG  | LEU | 630 | 62.831 | 2.180  | 12.035 | 1.00 | 29.14 |
| ATOM | 4864 | CD1 | LEU | 630 | 64.121 | 2.795  | 11.579 | 1.00 | 29.83 |
| ATOM | 4865 | CD2 | LEU | 630 | 61.693 | 2.543  | 11.086 | 1.00 | 32.59 |
| ATOM | 4866 | C   | LEU | 630 | 62.036 | -1.541 | 12.899 | 1.00 | 30.50 |
| ATOM | 4867 | O   | LEU | 630 | 62.290 | -1.910 | 14.042 | 1.00 | 31.06 |
| ATOM | 4868 | N   | VAL | 631 | 61.966 | -2.376 | 11.866 | 1.00 | 33.03 |
| ATOM | 4870 | CA  | VAL | 631 | 62.174 | -3.813 | 12.022 | 1.00 | 31.83 |
| ATOM | 4871 | CB  | VAL | 631 | 60.902 | -4.605 | 11.582 | 1.00 | 29.48 |
| ATOM | 4872 | CG1 | VAL | 631 | 61.017 | -6.067 | 11.980 | 1.00 | 29.39 |
| ATOM | 4873 | CG2 | VAL | 631 | 59.644 | -3.984 | 12.196 | 1.00 | 25.38 |
| ATOM | 4874 | C   | VAL | 631 | 63.379 | -4.242 | 11.196 | 1.00 | 32.37 |
| ATOM | 4875 | O   | VAL | 631 | 63.508 | -3.865 | 10.024 | 1.00 | 33.57 |
| ATOM | 4876 | N   | THR | 632 | 64.285 | -4.987 | 11.820 | 1.00 | 34.39 |
| ATOM | 4878 | CA  | THR | 632 | 65.504 | -5.453 | 11.145 | 1.00 | 35.84 |
| ATOM | 4879 | CB  | THR | 632 | 66.659 | -5.685 | 12.148 | 1.00 | 33.11 |
| ATOM | 4880 | OG1 | THR | 632 | 66.328 | -6.774 | 13.020 | 1.00 | 34.88 |
| ATOM | 4882 | CG2 | THR | 632 | 66.922 | -4.426 | 12.972 | 1.00 | 28.85 |
| ATOM | 4883 | C   | THR | 632 | 65.272 | -6.738 | 10.350 | 1.00 | 37.63 |
| ATOM | 4884 | O   | THR | 632 | 64.195 | -7.347 | 10.439 | 1.00 | 37.20 |
| ATOM | 4885 | N   | GLU | 633 | 66.289 | -7.163 | 9.600  | 1.00 | 39.78 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4887 | CA  | GLU | 633 | 66.182 | -8.379  | 8.794  | 1.00 | 43.30 |
| ATOM | 4888 | CB  | GLU | 633 | 67.437 | -8.590  | 7.933  | 1.00 | 46.66 |
| ATOM | 4889 | CG  | GLU | 633 | 67.336 | -9.729  | 6.876  | 1.00 | 51.37 |
| ATOM | 4890 | CD  | GLU | 633 | 66.490 | -9.404  | 5.622  | 1.00 | 54.30 |
| ATOM | 4891 | OE1 | GLU | 633 | 65.859 | -8.327  | 5.523  | 1.00 | 55.85 |
| ATOM | 4892 | OE2 | GLU | 633 | 66.460 | -10.256 | 4.710  | 1.00 | 55.95 |
| ATOM | 4893 | C   | GLU | 633 | 65.919 | -9.592  | 9.677  | 1.00 | 42.72 |
| ATOM | 4894 | O   | GLU | 633 | 65.360 | -10.582 | 9.222  | 1.00 | 45.10 |
| ATOM | 4895 | N   | ASP | 634 | 66.287 | -9.494  | 10.949 | 1.00 | 42.83 |
| ATOM | 4897 | CA  | ASP | 634 | 66.075 | -10.585 | 11.884 | 1.00 | 43.03 |
| ATOM | 4898 | CB  | ASP | 634 | 67.324 | -10.809 | 12.743 | 1.00 | 49.02 |
| ATOM | 4899 | CG  | ASP | 634 | 68.539 | -11.240 | 11.916 | 1.00 | 55.95 |
| ATOM | 4900 | OD1 | ASP | 634 | 68.462 | -12.292 | 11.237 | 1.00 | 59.10 |
| ATOM | 4901 | OD2 | ASP | 634 | 69.568 | -10.525 | 11.943 | 1.00 | 59.41 |
| ATOM | 4902 | C   | ASP | 634 | 64.848 | -10.340 | 12.751 | 1.00 | 41.75 |
| ATOM | 4903 | O   | ASP | 634 | 64.737 | -10.873 | 13.847 | 1.00 | 42.79 |
| ATOM | 4904 | N   | ASN | 635 | 63.937 | -9.508  | 12.257 | 1.00 | 42.51 |
| ATOM | 4906 | CA  | ASN | 635 | 62.686 | -9.186  | 12.939 | 1.00 | 42.53 |
| ATOM | 4907 | CB  | ASN | 635 | 61.768 | -10.417 | 12.992 | 1.00 | 45.07 |
| ATOM | 4908 | CG  | ASN | 635 | 61.483 | -10.985 | 11.624 | 1.00 | 46.54 |
| ATOM | 4909 | OD1 | ASN | 635 | 60.868 | -10.336 | 10.786 | 1.00 | 49.77 |
| ATOM | 4910 | ND2 | ASN | 635 | 61.949 | -12.192 | 11.383 | 1.00 | 49.29 |
| ATOM | 4913 | C   | ASN | 635 | 62.801 | -8.577  | 14.331 | 1.00 | 40.51 |
| ATOM | 4914 | O   | ASN | 635 | 61.939 | -8.800  | 15.187 | 1.00 | 41.80 |
| ATOM | 4915 | N   | VAL | 636 | 63.844 | -7.795  | 14.561 | 1.00 | 37.98 |
| ATOM | 4917 | CA  | VAL | 636 | 64.016 | -7.164  | 15.856 | 1.00 | 33.92 |
| ATOM | 4918 | CB  | VAL | 636 | 65.517 | -7.005  | 16.195 | 1.00 | 32.21 |
| ATOM | 4919 | CG1 | VAL | 636 | 65.697 | -6.284  | 17.530 | 1.00 | 31.40 |
| ATOM | 4920 | CG2 | VAL | 636 | 66.169 | -8.367  | 16.242 | 1.00 | 30.93 |
| ATOM | 4921 | C   | VAL | 636 | 63.349 | -5.797  | 15.811 | 1.00 | 31.85 |
| ATOM | 4922 | O   | VAL | 636 | 63.531 | -5.061  | 14.849 | 1.00 | 33.47 |
| ATOM | 4923 | N   | MET | 637 | 62.525 | -5.492  | 16.807 | 1.00 | 31.69 |
| ATOM | 4925 | CA  | MET | 637 | 61.860 | -4.194  | 16.879 | 1.00 | 31.44 |
| ATOM | 4926 | CB  | MET | 637 | 60.642 | -4.241  | 17.820 | 1.00 | 34.97 |
| ATOM | 4927 | CG  | MET | 637 | 59.559 | -5.264  | 17.455 | 1.00 | 36.80 |
| ATOM | 4928 | SD  | MET | 637 | 58.860 | -5.048  | 15.803 | 1.00 | 35.45 |
| ATOM | 4929 | CE  | MET | 637 | 59.030 | -6.709  | 15.116 | 1.00 | 32.12 |
| ATOM | 4930 | C   | MET | 637 | 62.874 | -3.209  | 17.454 | 1.00 | 31.86 |
| ATOM | 4931 | O   | MET | 637 | 63.512 | -3.496  | 18.479 | 1.00 | 29.47 |
| ATOM | 4932 | N   | LYS | 638 | 62.985 | -2.041  | 16.820 | 1.00 | 30.87 |
| ATOM | 4934 | CA  | LYS | 638 | 63.915 | -0.994  | 17.244 | 1.00 | 29.66 |
| ATOM | 4935 | CB  | LYS | 638 | 65.161 | -0.983  | 16.349 | 1.00 | 27.51 |
| ATOM | 4936 | CG  | LYS | 638 | 66.171 | -2.059  | 16.691 | 1.00 | 27.29 |
| ATOM | 4937 | CD  | LYS | 638 | 67.370 | -1.984  | 15.781 | 1.00 | 28.55 |
| ATOM | 4938 | CE  | LYS | 638 | 68.409 | -3.029  | 16.150 | 1.00 | 24.75 |
| ATOM | 4939 | NZ  | LYS | 638 | 68.964 | -2.785  | 17.498 | 1.00 | 25.59 |
| ATOM | 4943 | C   | LYS | 638 | 63.283 | 0.383   | 17.215 | 1.00 | 27.72 |
| ATOM | 4944 | O   | LYS | 638 | 62.918 | 0.869   | 16.146 | 1.00 | 27.66 |
| ATOM | 4945 | N   | ILE | 639 | 63.163 | 1.004   | 18.387 | 1.00 | 26.21 |
| ATOM | 4947 | CA  | ILE | 639 | 62.597 | 2.343   | 18.501 | 1.00 | 26.27 |
| ATOM | 4948 | CB  | ILE | 639 | 62.580 | 2.862   | 19.965 | 1.00 | 26.52 |
| ATOM | 4949 | CG2 | ILE | 639 | 61.896 | 4.206   | 20.017 | 1.00 | 21.50 |
| ATOM | 4950 | CG1 | ILE | 639 | 61.918 | 1.854   | 20.926 | 1.00 | 25.70 |
| ATOM | 4951 | CD1 | ILE | 639 | 60.496 | 1.494   | 20.599 | 1.00 | 25.62 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4952 | C   | ILE | 639 | 63.505 | 3.288  | 17.718 | 1.00 | 29.56 |
| ATOM | 4953 | O   | ILE | 639 | 64.730 | 3.281  | 17.906 | 1.00 | 27.74 |
| ATOM | 4954 | N   | ALA | 640 | 62.897 | 4.101  | 16.857 | 1.00 | 27.91 |
| ATOM | 4956 | CA  | ALA | 640 | 63.620 | 5.071  | 16.042 | 1.00 | 28.79 |
| ATOM | 4957 | CB  | ALA | 640 | 63.377 | 4.796  | 14.563 | 1.00 | 26.74 |
| ATOM | 4958 | C   | ALA | 640 | 63.164 | 6.487  | 16.385 | 1.00 | 28.91 |
| ATOM | 4959 | O   | ALA | 640 | 62.087 | 6.683  | 16.956 | 1.00 | 28.67 |
| ATOM | 4960 | N   | ASP | 641 | 64.007 | 7.464  | 16.067 | 1.00 | 28.25 |
| ATOM | 4962 | CA  | ASP | 641 | 63.708 | 8.876  | 16.296 | 1.00 | 30.80 |
| ATOM | 4963 | CB  | ASP | 641 | 62.520 | 9.319  | 15.428 | 1.00 | 33.44 |
| ATOM | 4964 | CG  | ASP | 641 | 62.869 | 9.393  | 13.948 | 1.00 | 38.01 |
| ATOM | 4965 | OD1 | ASP | 641 | 64.002 | 9.001  | 13.574 | 1.00 | 42.41 |
| ATOM | 4966 | OD2 | ASP | 641 | 62.006 | 9.847  | 13.160 | 1.00 | 41.74 |
| ATOM | 4967 | C   | ASP | 641 | 63.501 | 9.311  | 17.745 | 1.00 | 29.07 |
| ATOM | 4968 | O   | ASP | 641 | 62.847 | 10.309 | 18.020 | 1.00 | 28.42 |
| ATOM | 4969 | N   | PHE | 642 | 64.138 | 8.604  | 18.663 | 1.00 | 29.69 |
| ATOM | 4971 | CA  | PHE | 642 | 64.036 | 8.914  | 20.074 | 1.00 | 29.62 |
| ATOM | 4972 | CB  | PHE | 642 | 64.347 | 7.656  | 20.890 | 1.00 | 27.18 |
| ATOM | 4973 | CG  | PHE | 642 | 65.702 | 7.058  | 20.603 | 1.00 | 23.96 |
| ATOM | 4974 | CD1 | PHE | 642 | 66.848 | 7.559  | 21.219 | 1.00 | 23.66 |
| ATOM | 4975 | CD2 | PHE | 642 | 65.828 | 5.974  | 19.742 | 1.00 | 24.08 |
| ATOM | 4976 | CE1 | PHE | 642 | 68.090 | 6.992  | 20.980 | 1.00 | 23.02 |
| ATOM | 4977 | CE2 | PHE | 642 | 67.069 | 5.403  | 19.501 | 1.00 | 23.20 |
| ATOM | 4978 | CZ  | PHE | 642 | 68.200 | 5.909  | 20.121 | 1.00 | 21.68 |
| ATOM | 4979 | C   | PHE | 642 | 64.948 | 10.075 | 20.502 | 1.00 | 32.99 |
| ATOM | 4980 | O   | PHE | 642 | 64.755 | 10.664 | 21.574 | 1.00 | 32.10 |
| ATOM | 4981 | N   | GLY | 643 | 65.940 | 10.396 | 19.671 | 1.00 | 34.66 |
| ATOM | 4983 | CA  | GLY | 643 | 66.869 | 11.463 | 20.003 | 1.00 | 35.29 |
| ATOM | 4984 | C   | GLY | 643 | 66.639 | 12.755 | 19.250 | 1.00 | 39.13 |
| ATOM | 4985 | O   | GLY | 643 | 67.464 | 13.666 | 19.333 | 1.00 | 39.83 |
| ATOM | 4986 | N   | LEU | 644 | 65.520 | 12.850 | 18.532 | 1.00 | 42.26 |
| ATOM | 4988 | CA  | LEU | 644 | 65.202 | 14.043 | 17.745 | 1.00 | 46.25 |
| ATOM | 4989 | CB  | LEU | 644 | 63.935 | 13.843 | 16.911 | 1.00 | 44.59 |
| ATOM | 4990 | CG  | LEU | 644 | 63.911 | 12.839 | 15.763 | 1.00 | 43.00 |
| ATOM | 4991 | CD1 | LEU | 644 | 62.653 | 13.068 | 14.940 | 1.00 | 42.61 |
| ATOM | 4992 | CD2 | LEU | 644 | 65.119 | 13.016 | 14.889 | 1.00 | 45.65 |
| ATOM | 4993 | C   | LEU | 644 | 65.037 | 15.298 | 18.578 | 1.00 | 49.59 |
| ATOM | 4994 | O   | LEU | 644 | 64.391 | 15.281 | 19.623 | 1.00 | 51.90 |
| ATOM | 4995 | N   | ALA | 645 | 65.585 | 16.401 | 18.080 | 1.00 | 52.08 |
| ATOM | 4997 | CA  | ALA | 645 | 65.495 | 17.677 | 18.777 | 1.00 | 54.71 |
| ATOM | 4998 | CB  | ALA | 645 | 66.414 | 18.699 | 18.124 | 1.00 | 54.38 |
| ATOM | 4999 | C   | ALA | 645 | 64.053 | 18.184 | 18.790 | 1.00 | 55.44 |
| ATOM | 5000 | O   | ALA | 645 | 63.534 | 18.582 | 19.832 | 1.00 | 56.69 |
| ATOM | 5001 | N   | ASP | 652 | 52.389 | 21.543 | 14.759 | 1.00 | 73.74 |
| ATOM | 5003 | CA  | ASP | 652 | 51.207 | 21.745 | 13.934 | 1.00 | 73.83 |
| ATOM | 5004 | CB  | ASP | 652 | 51.601 | 21.995 | 12.472 | 1.00 | 73.22 |
| ATOM | 5005 | CG  | ASP | 652 | 50.398 | 22.241 | 11.569 | 1.00 | 72.95 |
| ATOM | 5006 | OD1 | ASP | 652 | 49.354 | 22.715 | 12.065 | 1.00 | 73.71 |
| ATOM | 5007 | OD2 | ASP | 652 | 50.497 | 21.956 | 10.357 | 1.00 | 73.02 |
| ATOM | 5008 | C   | ASP | 652 | 50.321 | 20.514 | 14.042 | 1.00 | 75.11 |
| ATOM | 5009 | O   | ASP | 652 | 50.568 | 19.495 | 13.394 | 1.00 | 75.96 |
| ATOM | 5010 | N   | TYR | 653 | 49.272 | 20.628 | 14.849 | 1.00 | 75.57 |
| ATOM | 5012 | CA  | TYR | 653 | 48.348 | 19.524 | 15.064 | 1.00 | 75.68 |
| ATOM | 5013 | CB  | TYR | 653 | 47.274 | 19.914 | 16.088 | 1.00 | 76.85 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5014 | CG  | TYR | 653 | 47.771 | 19.995 | 17.519 | 1.00 | 79.55 |
| ATOM | 5015 | CD1 | TYR | 653 | 46.983 | 20.567 | 18.518 | 1.00 | 80.89 |
| ATOM | 5016 | CE1 | TYR | 653 | 47.438 | 20.648 | 19.836 | 1.00 | 83.02 |
| ATOM | 5017 | CD2 | TYR | 653 | 49.032 | 19.503 | 17.874 | 1.00 | 80.87 |
| ATOM | 5018 | CE2 | TYR | 653 | 49.496 | 19.578 | 19.183 | 1.00 | 81.70 |
| ATOM | 5019 | CZ  | TYR | 653 | 48.698 | 20.152 | 20.160 | 1.00 | 83.09 |
| ATOM | 5020 | OH  | TYR | 653 | 49.165 | 20.243 | 21.451 | 1.00 | 83.73 |
| ATOM | 5022 | C   | TYR | 653 | 47.685 | 19.038 | 13.787 | 1.00 | 75.03 |
| ATOM | 5023 | O   | TYR | 653 | 47.232 | 17.897 | 13.711 | 1.00 | 75.97 |
| ATOM | 5024 | N   | TYR | 654 | 47.679 | 19.885 | 12.767 | 1.00 | 73.85 |
| ATOM | 5026 | CA  | TYR | 654 | 47.039 | 19.538 | 11.507 | 1.00 | 73.32 |
| ATOM | 5027 | CB  | TYR | 654 | 46.276 | 20.750 | 10.972 | 1.00 | 71.97 |
| ATOM | 5028 | CG  | TYR | 654 | 45.259 | 21.276 | 11.954 | 1.00 | 70.94 |
| ATOM | 5029 | CD1 | TYR | 654 | 45.659 | 21.801 | 13.185 | 1.00 | 71.41 |
| ATOM | 5030 | CE1 | TYR | 654 | 44.733 | 22.234 | 14.121 | 1.00 | 73.60 |
| ATOM | 5031 | CD2 | TYR | 654 | 43.899 | 21.206 | 11.680 | 1.00 | 71.81 |
| ATOM | 5032 | CE2 | TYR | 654 | 42.956 | 21.642 | 12.610 | 1.00 | 74.81 |
| ATOM | 5033 | CZ  | TYR | 654 | 43.380 | 22.152 | 13.832 | 1.00 | 74.84 |
| ATOM | 5034 | OH  | TYR | 654 | 42.457 | 22.571 | 14.769 | 1.00 | 76.60 |
| ATOM | 5036 | C   | TYR | 654 | 47.975 | 18.967 | 10.446 | 1.00 | 73.82 |
| ATOM | 5037 | O   | TYR | 654 | 47.545 | 18.671 | 9.329  | 1.00 | 74.25 |
| ATOM | 5038 | N   | LYS | 655 | 49.249 | 18.806 | 10.784 | 1.00 | 74.04 |
| ATOM | 5040 | CA  | LYS | 655 | 50.195 | 18.256 | 9.827  | 1.00 | 75.41 |
| ATOM | 5041 | CB  | LYS | 655 | 51.626 | 18.680 | 10.164 | 1.00 | 78.45 |
| ATOM | 5042 | CG  | LYS | 655 | 52.647 | 18.198 | 9.151  | 1.00 | 83.01 |
| ATOM | 5043 | CD  | LYS | 655 | 54.062 | 18.589 | 9.537  | 1.00 | 87.72 |
| ATOM | 5044 | CE  | LYS | 655 | 55.076 | 17.813 | 8.703  | 1.00 | 91.45 |
| ATOM | 5045 | NZ  | LYS | 655 | 56.489 | 18.133 | 9.074  | 1.00 | 94.17 |
| ATOM | 5049 | C   | LYS | 655 | 50.075 | 16.736 | 9.832  | 1.00 | 75.50 |
| ATOM | 5050 | O   | LYS | 655 | 50.245 | 16.092 | 10.872 | 1.00 | 75.90 |
| ATOM | 5051 | N   | LYS | 656 | 49.750 | 16.173 | 8.672  | 1.00 | 75.26 |
| ATOM | 5053 | CA  | LYS | 656 | 49.597 | 14.730 | 8.533  | 1.00 | 74.97 |
| ATOM | 5054 | CB  | LYS | 656 | 48.723 | 14.406 | 7.323  | 1.00 | 75.40 |
| ATOM | 5055 | CG  | LYS | 656 | 47.266 | 14.753 | 7.519  | 1.00 | 76.87 |
| ATOM | 5056 | CD  | LYS | 656 | 46.489 | 14.535 | 6.239  | 1.00 | 80.75 |
| ATOM | 5057 | CE  | LYS | 656 | 45.001 | 14.655 | 6.483  | 1.00 | 83.60 |
| ATOM | 5058 | NZ  | LYS | 656 | 44.236 | 14.637 | 5.204  | 1.00 | 87.14 |
| ATOM | 5062 | C   | LYS | 656 | 50.939 | 14.016 | 8.414  | 1.00 | 74.58 |
| ATOM | 5063 | O   | LYS | 656 | 51.904 | 14.578 | 7.897  | 1.00 | 75.01 |
| ATOM | 5064 | N   | GLY | 660 | 49.137 | 9.764  | 5.736  | 1.00 | 59.18 |
| ATOM | 5066 | CA  | GLY | 660 | 48.106 | 10.781 | 5.848  | 1.00 | 56.19 |
| ATOM | 5067 | C   | GLY | 660 | 47.407 | 10.761 | 7.192  | 1.00 | 55.31 |
| ATOM | 5068 | O   | GLY | 660 | 46.289 | 11.263 | 7.328  | 1.00 | 56.96 |
| ATOM | 5069 | N   | ARG | 661 | 48.059 | 10.163 | 8.183  | 1.00 | 53.02 |
| ATOM | 5071 | CA  | ARG | 661 | 47.493 | 10.083 | 9.527  | 1.00 | 49.80 |
| ATOM | 5072 | CB  | ARG | 661 | 47.944 | 8.799  | 10.229 | 1.00 | 51.79 |
| ATOM | 5073 | CG  | ARG | 661 | 47.683 | 7.523  | 9.450  | 1.00 | 50.59 |
| ATOM | 5074 | CD  | ARG | 661 | 47.822 | 6.323  | 10.367 | 1.00 | 53.68 |
| ATOM | 5075 | NE  | ARG | 661 | 47.714 | 5.044  | 9.665  | 1.00 | 52.66 |
| ATOM | 5077 | CZ  | ARG | 661 | 47.928 | 3.863  | 10.236 | 1.00 | 51.73 |
| ATOM | 5078 | NH1 | ARG | 661 | 48.264 | 3.794  | 11.518 | 1.00 | 50.23 |
| ATOM | 5081 | NH2 | ARG | 661 | 47.800 | 2.751  | 9.528  | 1.00 | 52.58 |
| ATOM | 5084 | C   | ARG | 661 | 47.915 | 11.297 | 10.346 | 1.00 | 44.80 |
| ATOM | 5085 | O   | ARG | 661 | 48.865 | 11.998 | 9.986  | 1.00 | 43.61 |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5086 | N   | LEU | 662 | 47.221 | 11.528 | 11.453 | 1.00 | 40.74 |
| ATOM | 5088 | CA  | LEU | 662 | 47.518 | 12.654 | 12.333 | 1.00 | 37.88 |
| ATOM | 5089 | CB  | LEU | 662 | 46.234 | 13.415 | 12.671 | 1.00 | 36.19 |
| ATOM | 5090 | CG  | LEU | 662 | 45.515 | 14.074 | 11.499 | 1.00 | 35.32 |
| ATOM | 5091 | CD1 | LEU | 662 | 44.045 | 14.278 | 11.831 | 1.00 | 31.05 |
| ATOM | 5092 | CD2 | LEU | 662 | 46.217 | 15.383 | 11.156 | 1.00 | 34.37 |
| ATOM | 5093 | C   | LEU | 662 | 48.162 | 12.170 | 13.622 | 1.00 | 35.34 |
| ATOM | 5094 | O   | LEU | 662 | 47.529 | 11.479 | 14.417 | 1.00 | 33.06 |
| ATOM | 5095 | N   | PRO | 663 | 49.441 | 12.518 | 13.843 | 1.00 | 36.39 |
| ATOM | 5096 | CD  | PRO | 663 | 50.375 | 13.113 | 12.868 | 1.00 | 37.57 |
| ATOM | 5097 | CA  | PRO | 663 | 50.158 | 12.107 | 15.054 | 1.00 | 36.39 |
| ATOM | 5098 | CB  | PRO | 663 | 51.516 | 12.787 | 14.885 | 1.00 | 36.98 |
| ATOM | 5099 | CG  | PRO | 663 | 51.728 | 12.657 | 13.401 | 1.00 | 38.48 |
| ATOM | 5100 | C   | PRO | 663 | 49.477 | 12.491 | 16.371 | 1.00 | 35.47 |
| ATOM | 5101 | O   | PRO | 663 | 49.699 | 11.841 | 17.392 | 1.00 | 35.08 |
| ATOM | 5102 | N   | VAL | 664 | 48.646 | 13.532 | 16.362 | 1.00 | 34.28 |
| ATOM | 5104 | CA  | VAL | 664 | 47.951 | 13.931 | 17.583 | 1.00 | 34.43 |
| ATOM | 5105 | CB  | VAL | 664 | 47.038 | 15.181 | 17.376 | 1.00 | 36.92 |
| ATOM | 5106 | CG1 | VAL | 664 | 47.885 | 16.408 | 17.160 | 1.00 | 37.55 |
| ATOM | 5107 | CG2 | VAL | 664 | 46.091 | 14.989 | 16.186 | 1.00 | 38.28 |
| ATOM | 5108 | C   | VAL | 664 | 47.137 | 12.749 | 18.120 | 1.00 | 33.03 |
| ATOM | 5109 | O   | VAL | 664 | 46.908 | 12.641 | 19.318 | 1.00 | 34.62 |
| ATOM | 5110 | N   | LYS | 665 | 46.803 | 11.809 | 17.236 | 1.00 | 32.47 |
| ATOM | 5112 | CA  | LYS | 665 | 46.040 | 10.631 | 17.614 | 1.00 | 30.71 |
| ATOM | 5113 | CB  | LYS | 665 | 45.456 | 9.958  | 16.370 | 1.00 | 29.59 |
| ATOM | 5114 | CG  | LYS | 665 | 44.324 | 10.774 | 15.768 | 1.00 | 29.64 |
| ATOM | 5115 | CD  | LYS | 665 | 43.927 | 10.334 | 14.367 | 1.00 | 31.86 |
| ATOM | 5116 | CE  | LYS | 665 | 42.664 | 11.056 | 13.899 | 1.00 | 30.42 |
| ATOM | 5117 | NZ  | LYS | 665 | 42.296 | 10.720 | 12.486 | 1.00 | 26.50 |
| ATOM | 5121 | C   | LYS | 665 | 46.801 | 9.644  | 18.498 | 1.00 | 32.23 |
| ATOM | 5122 | O   | LYS | 665 | 46.230 | 8.659  | 18.955 | 1.00 | 30.04 |
| ATOM | 5123 | N   | TRP | 666 | 48.080 | 9.915  | 18.748 | 1.00 | 31.38 |
| ATOM | 5125 | CA  | TRP | 666 | 48.886 | 9.068  | 19.619 | 1.00 | 32.32 |
| ATOM | 5126 | CB  | TRP | 666 | 50.204 | 8.682  | 18.945 | 1.00 | 31.07 |
| ATOM | 5127 | CG  | TRP | 666 | 50.078 | 7.530  | 18.006 | 1.00 | 28.26 |
| ATOM | 5128 | CD2 | TRP | 666 | 49.531 | 7.559  | 16.684 | 1.00 | 27.07 |
| ATOM | 5129 | CE2 | TRP | 666 | 49.630 | 6.257  | 16.163 | 1.00 | 26.71 |
| ATOM | 5130 | CE3 | TRP | 666 | 48.982 | 8.569  | 15.882 | 1.00 | 26.56 |
| ATOM | 5131 | CD1 | TRP | 666 | 50.473 | 6.238  | 18.234 | 1.00 | 24.97 |
| ATOM | 5132 | NE1 | TRP | 666 | 50.206 | 5.469  | 17.132 | 1.00 | 27.38 |
| ATOM | 5134 | CZ2 | TRP | 666 | 49.190 | 5.929  | 14.874 | 1.00 | 27.22 |
| ATOM | 5135 | CZ3 | TRP | 666 | 48.548 | 8.248  | 14.599 | 1.00 | 30.14 |
| ATOM | 5136 | CH2 | TRP | 666 | 48.658 | 6.934  | 14.107 | 1.00 | 26.64 |
| ATOM | 5137 | C   | TRP | 666 | 49.203 | 9.802  | 20.913 | 1.00 | 33.84 |
| ATOM | 5138 | O   | TRP | 666 | 49.688 | 9.202  | 21.873 | 1.00 | 32.82 |
| ATOM | 5139 | N   | MET | 667 | 48.905 | 11.099 | 20.929 | 1.00 | 35.75 |
| ATOM | 5141 | CA  | MET | 667 | 49.180 | 11.960 | 22.069 | 1.00 | 37.60 |
| ATOM | 5142 | CB  | MET | 667 | 49.150 | 13.423 | 21.641 | 1.00 | 41.95 |
| ATOM | 5143 | CG  | MET | 667 | 50.487 | 13.975 | 21.226 | 1.00 | 48.44 |
| ATOM | 5144 | SD  | MET | 667 | 50.384 | 15.728 | 20.919 | 1.00 | 55.33 |
| ATOM | 5145 | CE  | MET | 667 | 50.711 | 15.745 | 19.183 | 1.00 | 49.29 |
| ATOM | 5146 | C   | MET | 667 | 48.294 | 11.802 | 23.289 | 1.00 | 38.98 |
| ATOM | 5147 | O   | MET | 667 | 47.066 | 11.699 | 23.183 | 1.00 | 39.18 |
| ATOM | 5148 | N   | ALA | 668 | 48.933 | 11.824 | 24.456 | 1.00 | 38.72 |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5150 | CA  | ALA | 668 | 48.231 | 11.728 | 25.727 | 1.00 | 37.82 |
| ATOM | 5151 | CB  | ALA | 668 | 49.224 | 11.527 | 26.857 | 1.00 | 38.49 |
| ATOM | 5152 | C   | ALA | 668 | 47.497 | 13.051 | 25.891 | 1.00 | 38.16 |
| ATOM | 5153 | O   | ALA | 668 | 47.937 | 14.072 | 25.363 | 1.00 | 37.21 |
| ATOM | 5154 | N   | PRO | 669 | 46.383 | 13.062 | 26.644 | 1.00 | 39.78 |
| ATOM | 5155 | CD  | PRO | 669 | 45.785 | 11.931 | 27.367 | 1.00 | 40.08 |
| ATOM | 5156 | CA  | PRO | 669 | 45.598 | 14.281 | 26.858 | 1.00 | 40.68 |
| ATOM | 5157 | CB  | PRO | 669 | 44.474 | 13.806 | 27.782 | 1.00 | 42.15 |
| ATOM | 5158 | CG  | PRO | 669 | 44.346 | 12.352 | 27.446 | 1.00 | 42.56 |
| ATOM | 5159 | C   | PRO | 669 | 46.398 | 15.432 | 27.484 | 1.00 | 42.69 |
| ATOM | 5160 | O   | PRO | 669 | 46.320 | 16.566 | 27.019 | 1.00 | 42.14 |
| ATOM | 5161 | N   | GLU | 670 | 47.168 | 15.153 | 28.532 | 1.00 | 43.21 |
| ATOM | 5163 | CA  | GLU | 670 | 47.956 | 16.211 | 29.160 | 1.00 | 44.62 |
| ATOM | 5164 | CB  | GLU | 670 | 48.651 | 15.719 | 30.429 | 1.00 | 44.95 |
| ATOM | 5165 | CG  | GLU | 670 | 49.824 | 14.782 | 30.197 | 1.00 | 45.54 |
| ATOM | 5166 | CD  | GLU | 670 | 49.422 | 13.332 | 30.079 | 1.00 | 42.72 |
| ATOM | 5167 | OE1 | GLU | 670 | 50.332 | 12.481 | 30.066 | 1.00 | 41.43 |
| ATOM | 5168 | OE2 | GLU | 670 | 48.212 | 13.036 | 30.015 | 1.00 | 44.44 |
| ATOM | 5169 | C   | GLU | 670 | 48.993 | 16.772 | 28.195 | 1.00 | 44.88 |
| ATOM | 5170 | O   | GLU | 670 | 49.248 | 17.968 | 28.194 | 1.00 | 45.08 |
| ATOM | 5171 | N   | ALA | 671 | 49.565 | 15.908 | 27.358 | 1.00 | 44.75 |
| ATOM | 5173 | CA  | ALA | 671 | 50.573 | 16.323 | 26.392 | 1.00 | 45.92 |
| ATOM | 5174 | CB  | ALA | 671 | 51.256 | 15.095 | 25.766 | 1.00 | 44.10 |
| ATOM | 5175 | C   | ALA | 671 | 49.944 | 17.193 | 25.314 | 1.00 | 47.96 |
| ATOM | 5176 | O   | ALA | 671 | 50.526 | 18.192 | 24.894 | 1.00 | 49.16 |
| ATOM | 5177 | N   | LEU | 672 | 48.729 | 16.836 | 24.917 | 1.00 | 49.84 |
| ATOM | 5179 | CA  | LEU | 672 | 47.989 | 17.554 | 23.881 | 1.00 | 50.74 |
| ATOM | 5180 | CB  | LEU | 672 | 46.926 | 16.619 | 23.289 | 1.00 | 53.20 |
| ATOM | 5181 | CG  | LEU | 672 | 46.184 | 16.989 | 22.004 | 1.00 | 55.26 |
| ATOM | 5182 | CD1 | LEU | 672 | 47.153 | 17.155 | 20.856 | 1.00 | 57.12 |
| ATOM | 5183 | CD2 | LEU | 672 | 45.203 | 15.895 | 21.680 | 1.00 | 52.86 |
| ATOM | 5184 | C   | LEU | 672 | 47.327 | 18.826 | 24.408 | 1.00 | 50.79 |
| ATOM | 5185 | O   | LEU | 672 | 47.302 | 19.855 | 23.736 | 1.00 | 50.95 |
| ATOM | 5186 | N   | PHE | 673 | 46.792 | 18.751 | 25.618 | 1.00 | 52.07 |
| ATOM | 5188 | CA  | PHE | 673 | 46.111 | 19.884 | 26.226 | 1.00 | 54.39 |
| ATOM | 5189 | CB  | PHE | 673 | 44.892 | 19.396 | 27.019 | 1.00 | 51.21 |
| ATOM | 5190 | CG  | PHE | 673 | 43.871 | 18.656 | 26.186 | 1.00 | 48.49 |
| ATOM | 5191 | CD1 | PHE | 673 | 43.304 | 17.473 | 26.646 | 1.00 | 47.79 |
| ATOM | 5192 | CD2 | PHE | 673 | 43.470 | 19.149 | 24.949 | 1.00 | 49.04 |
| ATOM | 5193 | CE1 | PHE | 673 | 42.349 | 16.789 | 25.888 | 1.00 | 47.90 |
| ATOM | 5194 | CE2 | PHE | 673 | 42.511 | 18.473 | 24.182 | 1.00 | 49.71 |
| ATOM | 5195 | CZ  | PHE | 673 | 41.952 | 17.288 | 24.655 | 1.00 | 46.86 |
| ATOM | 5196 | C   | PHE | 673 | 47.007 | 20.741 | 27.123 | 1.00 | 58.25 |
| ATOM | 5197 | O   | PHE | 673 | 47.000 | 21.971 | 27.034 | 1.00 | 60.52 |
| ATOM | 5198 | N   | ASP | 674 | 47.784 | 20.094 | 27.983 | 1.00 | 59.63 |
| ATOM | 5200 | CA  | ASP | 674 | 48.652 | 20.815 | 28.905 | 1.00 | 62.11 |
| ATOM | 5201 | CB  | ASP | 674 | 48.568 | 20.196 | 30.307 | 1.00 | 63.81 |
| ATOM | 5202 | CG  | ASP | 674 | 47.143 | 20.015 | 30.791 | 1.00 | 66.46 |
| ATOM | 5203 | OD1 | ASP | 674 | 46.815 | 18.901 | 31.247 | 1.00 | 66.70 |
| ATOM | 5204 | OD2 | ASP | 674 | 46.354 | 20.981 | 30.722 | 1.00 | 68.77 |
| ATOM | 5205 | C   | ASP | 674 | 50.119 | 20.852 | 28.482 | 1.00 | 63.36 |
| ATOM | 5206 | O   | ASP | 674 | 50.979 | 21.175 | 29.310 | 1.00 | 64.11 |
| ATOM | 5207 | N   | ARG | 675 | 50.410 | 20.486 | 27.228 | 1.00 | 62.94 |
| ATOM | 5209 | CA  | ARG | 675 | 51.789 | 20.456 | 26.706 | 1.00 | 60.75 |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5210 | CB  | ARG | 675 | 52.277 | 21.874 | 26.360 | 1.00 | 60.56 |
| ATOM | 5211 | CG  | ARG | 675 | 51.474 | 22.560 | 25.261 | 1.00 | 63.67 |
| ATOM | 5212 | CD  | ARG | 675 | 51.986 | 23.970 | 24.964 | 1.00 | 66.99 |
| ATOM | 5213 | NE  | ARG | 675 | 53.308 | 23.980 | 24.337 | 1.00 | 69.34 |
| ATOM | 5215 | CZ  | ARG | 675 | 54.063 | 25.068 | 24.173 | 1.00 | 68.48 |
| ATOM | 5216 | NH1 | ARG | 675 | 53.637 | 26.254 | 24.590 | 1.00 | 65.81 |
| ATOM | 5219 | NH2 | ARG | 675 | 55.254 | 24.965 | 23.593 | 1.00 | 68.76 |
| ATOM | 5222 | C   | ARG | 675 | 52.750 | 19.793 | 27.700 | 1.00 | 58.06 |
| ATOM | 5223 | O   | ARG | 675 | 53.933 | 20.130 | 27.766 | 1.00 | 59.30 |
| ATOM | 5224 | N   | ILE | 676 | 52.221 | 18.859 | 28.483 | 1.00 | 55.62 |
| ATOM | 5226 | CA  | ILE | 676 | 52.992 | 18.141 | 29.489 | 1.00 | 54.09 |
| ATOM | 5227 | CB  | ILE | 676 | 52.154 | 17.921 | 30.765 | 1.00 | 52.69 |
| ATOM | 5228 | CG2 | ILE | 676 | 52.749 | 16.811 | 31.629 | 1.00 | 49.38 |
| ATOM | 5229 | CG1 | ILE | 676 | 52.049 | 19.230 | 31.540 | 1.00 | 53.15 |
| ATOM | 5230 | CD1 | ILE | 676 | 51.306 | 19.103 | 32.845 | 1.00 | 57.79 |
| ATOM | 5231 | C   | ILE | 676 | 53.468 | 16.796 | 28.953 | 1.00 | 53.83 |
| ATOM | 5232 | O   | ILE | 676 | 52.668 | 15.891 | 28.730 | 1.00 | 54.87 |
| ATOM | 5233 | N   | TYR | 677 | 54.773 | 16.671 | 28.745 | 1.00 | 51.76 |
| ATOM | 5235 | CA  | TYR | 677 | 55.343 | 15.436 | 28.236 | 1.00 | 49.42 |
| ATOM | 5236 | CB  | TYR | 677 | 56.232 | 15.722 | 27.031 | 1.00 | 51.33 |
| ATOM | 5237 | CG  | TYR | 677 | 55.466 | 16.181 | 25.809 | 1.00 | 56.22 |
| ATOM | 5238 | CD1 | TYR | 677 | 55.158 | 17.529 | 25.619 | 1.00 | 56.12 |
| ATOM | 5239 | CE1 | TYR | 677 | 54.491 | 17.960 | 24.479 | 1.00 | 56.18 |
| ATOM | 5240 | CD2 | TYR | 677 | 55.078 | 15.269 | 24.823 | 1.00 | 58.13 |
| ATOM | 5241 | CE2 | TYR | 677 | 54.411 | 15.689 | 23.679 | 1.00 | 57.65 |
| ATOM | 5242 | CZ  | TYR | 677 | 54.125 | 17.035 | 23.512 | 1.00 | 58.23 |
| ATOM | 5243 | OH  | TYR | 677 | 53.504 | 17.457 | 22.360 | 1.00 | 61.71 |
| ATOM | 5245 | C   | TYR | 677 | 56.136 | 14.730 | 29.316 | 1.00 | 46.46 |
| ATOM | 5246 | O   | TYR | 677 | 56.983 | 15.335 | 29.970 | 1.00 | 48.65 |
| ATOM | 5247 | N   | THR | 678 | 55.818 | 13.464 | 29.537 | 1.00 | 41.73 |
| ATOM | 5249 | CA  | THR | 678 | 56.498 | 12.664 | 30.535 | 1.00 | 39.83 |
| ATOM | 5250 | CB  | THR | 678 | 55.680 | 12.593 | 31.861 | 1.00 | 41.78 |
| ATOM | 5251 | OG1 | THR | 678 | 54.462 | 11.867 | 31.642 | 1.00 | 45.77 |
| ATOM | 5253 | CG2 | THR | 678 | 55.342 | 13.988 | 32.383 | 1.00 | 41.84 |
| ATOM | 5254 | C   | THR | 678 | 56.661 | 11.242 | 30.011 | 1.00 | 37.46 |
| ATOM | 5255 | O   | THR | 678 | 56.258 | 10.917 | 28.897 | 1.00 | 37.51 |
| ATOM | 5256 | N   | HIS | 679 | 57.264 | 10.388 | 30.825 | 1.00 | 36.36 |
| ATOM | 5258 | CA  | HIS | 679 | 57.423 | 9.003  | 30.457 | 1.00 | 35.91 |
| ATOM | 5259 | CB  | HIS | 679 | 58.348 | 8.294  | 31.439 | 1.00 | 35.05 |
| ATOM | 5260 | CG  | HIS | 679 | 59.761 | 8.798  | 31.404 | 1.00 | 37.68 |
| ATOM | 5261 | CD2 | HIS | 679 | 60.453 | 9.569  | 32.278 | 1.00 | 37.89 |
| ATOM | 5262 | ND1 | HIS | 679 | 60.632 | 8.507  | 30.380 | 1.00 | 37.49 |
| ATOM | 5264 | CE1 | HIS | 679 | 61.803 | 9.071  | 30.621 | 1.00 | 39.58 |
| ATOM | 5265 | NE2 | HIS | 679 | 61.721 | 9.722  | 31.766 | 1.00 | 39.81 |
| ATOM | 5267 | C   | HIS | 679 | 56.032 | 8.376  | 30.441 | 1.00 | 36.76 |
| ATOM | 5268 | O   | HIS | 679 | 55.771 | 7.458  | 29.660 | 1.00 | 37.16 |
| ATOM | 5269 | N   | GLN | 680 | 55.126 | 8.908  | 31.264 | 1.00 | 36.27 |
| ATOM | 5271 | CA  | GLN | 680 | 53.754 | 8.407  | 31.332 | 1.00 | 37.71 |
| ATOM | 5272 | CB  | GLN | 680 | 53.069 | 8.815  | 32.640 | 1.00 | 40.95 |
| ATOM | 5273 | CG  | GLN | 680 | 53.645 | 8.128  | 33.884 | 1.00 | 45.23 |
| ATOM | 5274 | CD  | GLN | 680 | 53.676 | 6.595  | 33.780 | 1.00 | 44.44 |
| ATOM | 5275 | OE1 | GLN | 680 | 52.669 | 5.925  | 33.996 | 1.00 | 42.76 |
| ATOM | 5276 | NE2 | GLN | 680 | 54.846 | 6.043  | 33.464 | 1.00 | 40.57 |
| ATOM | 5279 | C   | GLN | 680 | 52.927 | 8.842  | 30.121 | 1.00 | 37.54 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5280 | O   | GLN | 680 | 51.950 | 8.185  | 29.765 | 1.00 | 37.93 |
| ATOM | 5281 | N   | SER | 681 | 53.282 | 9.961  | 29.504 | 1.00 | 36.38 |
| ATOM | 5283 | CA  | SER | 681 | 52.563 | 10.367 | 28.306 | 1.00 | 38.05 |
| ATOM | 5284 | CB  | SER | 681 | 52.857 | 11.819 | 27.940 | 1.00 | 41.41 |
| ATOM | 5285 | OG  | SER | 681 | 54.239 | 12.069 | 27.938 | 1.00 | 42.92 |
| ATOM | 5287 | C   | SER | 681 | 52.991 | 9.421  | 27.178 | 1.00 | 37.92 |
| ATOM | 5288 | O   | SER | 681 | 52.205 | 9.148  | 26.263 | 1.00 | 37.21 |
| ATOM | 5289 | N   | ASP | 682 | 54.237 | 8.932  | 27.248 | 1.00 | 34.77 |
| ATOM | 5291 | CA  | ASP | 682 | 54.750 | 7.972  | 26.267 | 1.00 | 31.99 |
| ATOM | 5292 | CB  | ASP | 682 | 56.243 | 7.683  | 26.481 | 1.00 | 31.08 |
| ATOM | 5293 | CG  | ASP | 682 | 57.165 | 8.638  | 25.721 | 1.00 | 33.63 |
| ATOM | 5294 | OD1 | ASP | 682 | 58.386 | 8.503  | 25.920 | 1.00 | 32.35 |
| ATOM | 5295 | OD2 | ASP | 682 | 56.707 | 9.500  | 24.930 | 1.00 | 29.46 |
| ATOM | 5296 | C   | ASP | 682 | 53.969 | 6.672  | 26.457 | 1.00 | 31.54 |
| ATOM | 5297 | O   | ASP | 682 | 53.675 | 5.971  | 25.493 | 1.00 | 29.94 |
| ATOM | 5298 | N   | VAL | 683 | 53.677 | 6.334  | 27.712 | 1.00 | 30.48 |
| ATOM | 5300 | CA  | VAL | 683 | 52.913 | 5.126  | 28.023 | 1.00 | 32.94 |
| ATOM | 5301 | CB  | VAL | 683 | 52.731 | 4.939  | 29.572 | 1.00 | 33.94 |
| ATOM | 5302 | CG1 | VAL | 683 | 51.635 | 3.905  | 29.872 | 1.00 | 32.71 |
| ATOM | 5303 | CG2 | VAL | 683 | 54.042 | 4.474  | 30.209 | 1.00 | 27.41 |
| ATOM | 5304 | C   | VAL | 683 | 51.545 | 5.164  | 27.299 | 1.00 | 32.27 |
| ATOM | 5305 | O   | VAL | 683 | 51.106 | 4.158  | 26.733 | 1.00 | 30.54 |
| ATOM | 5306 | N   | TRP | 684 | 50.902 | 6.332  | 27.282 | 1.00 | 32.57 |
| ATOM | 5308 | CA  | TRP | 684 | 49.616 | 6.477  | 26.600 | 1.00 | 32.76 |
| ATOM | 5309 | CB  | TRP | 684 | 49.060 | 7.895  | 26.765 | 1.00 | 33.67 |
| ATOM | 5310 | CG  | TRP | 684 | 47.855 | 8.210  | 25.891 | 1.00 | 38.22 |
| ATOM | 5311 | CD2 | TRP | 684 | 46.503 | 8.435  | 26.328 | 1.00 | 39.96 |
| ATOM | 5312 | CE2 | TRP | 684 | 45.734 | 8.735  | 25.177 | 1.00 | 39.59 |
| ATOM | 5313 | CE3 | TRP | 684 | 45.869 | 8.416  | 27.578 | 1.00 | 39.26 |
| ATOM | 5314 | CD1 | TRP | 684 | 47.842 | 8.373  | 24.528 | 1.00 | 39.02 |
| ATOM | 5315 | NE1 | TRP | 684 | 46.576 | 8.687  | 24.096 | 1.00 | 38.42 |
| ATOM | 5317 | CZ2 | TRP | 684 | 44.362 | 9.011  | 25.240 | 1.00 | 36.62 |
| ATOM | 5318 | CZ3 | TRP | 684 | 44.502 | 8.691  | 27.641 | 1.00 | 40.70 |
| ATOM | 5319 | CH2 | TRP | 684 | 43.766 | 8.982  | 26.475 | 1.00 | 40.57 |
| ATOM | 5320 | C   | TRP | 684 | 49.819 | 6.158  | 25.125 | 1.00 | 31.98 |
| ATOM | 5321 | O   | TRP | 684 | 49.066 | 5.367  | 24.557 | 1.00 | 32.43 |
| ATOM | 5322 | N   | SER | 685 | 50.859 | 6.748  | 24.529 | 1.00 | 29.63 |
| ATOM | 5324 | CA  | SER | 685 | 51.195 | 6.531  | 23.119 | 1.00 | 28.62 |
| ATOM | 5325 | CB  | SER | 685 | 52.457 | 7.296  | 22.751 | 1.00 | 24.72 |
| ATOM | 5326 | OG  | SER | 685 | 52.323 | 8.664  | 23.072 | 1.00 | 30.04 |
| ATOM | 5328 | C   | SER | 685 | 51.414 | 5.055  | 22.825 | 1.00 | 27.91 |
| ATOM | 5329 | O   | SER | 685 | 51.022 | 4.555  | 21.767 | 1.00 | 28.60 |
| ATOM | 5330 | N   | PHE | 686 | 52.063 | 4.372  | 23.763 | 1.00 | 27.96 |
| ATOM | 5332 | CA  | PHE | 686 | 52.333 | 2.947  | 23.662 | 1.00 | 27.03 |
| ATOM | 5333 | CB  | PHE | 686 | 53.163 | 2.499  | 24.868 | 1.00 | 25.79 |
| ATOM | 5334 | CG  | PHE | 686 | 53.440 | 1.029  | 24.890 | 1.00 | 26.25 |
| ATOM | 5335 | CD1 | PHE | 686 | 54.252 | 0.451  | 23.923 | 1.00 | 27.32 |
| ATOM | 5336 | CD2 | PHE | 686 | 52.839 | 0.208  | 25.841 | 1.00 | 26.22 |
| ATOM | 5337 | CE1 | PHE | 686 | 54.464 | -0.930 | 23.900 | 1.00 | 25.87 |
| ATOM | 5338 | CE2 | PHE | 686 | 53.046 | -1.170 | 25.828 | 1.00 | 24.37 |
| ATOM | 5339 | CZ  | PHE | 686 | 53.856 | -1.740 | 24.854 | 1.00 | 26.42 |
| ATOM | 5340 | C   | PHE | 686 | 51.003 | 2.160  | 23.596 | 1.00 | 28.82 |
| ATOM | 5341 | O   | PHE | 686 | 50.912 | 1.129  | 22.914 | 1.00 | 26.74 |
| ATOM | 5342 | N   | GLY | 687 | 49.991 | 2.636  | 24.324 | 1.00 | 29.52 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5344 | CA  | GLY | 687 | 48.688 | 1.982  | 24.302 | 1.00 | 31.57 |
| ATOM | 5345 | C   | GLY | 687 | 48.095 | 2.036  | 22.896 | 1.00 | 30.73 |
| ATOM | 5346 | O   | GLY | 687 | 47.490 | 1.069  | 22.414 | 1.00 | 29.83 |
| ATOM | 5347 | N   | VAL | 688 | 48.269 | 3.179  | 22.238 | 1.00 | 29.06 |
| ATOM | 5349 | CA  | VAL | 688 | 47.777 | 3.350  | 20.879 | 1.00 | 28.93 |
| ATOM | 5350 | CB  | VAL | 688 | 47.800 | 4.831  | 20.424 | 1.00 | 27.24 |
| ATOM | 5351 | CG1 | VAL | 688 | 47.211 | 4.963  | 19.020 | 1.00 | 28.29 |
| ATOM | 5352 | CG2 | VAL | 688 | 46.990 | 5.691  | 21.404 | 1.00 | 26.96 |
| ATOM | 5353 | C   | VAL | 688 | 48.612 | 2.475  | 19.951 | 1.00 | 28.49 |
| ATOM | 5354 | O   | VAL | 688 | 48.080 | 1.866  | 19.024 | 1.00 | 28.84 |
| ATOM | 5355 | N   | LEU | 689 | 49.905 | 2.350  | 20.252 | 1.00 | 27.99 |
| ATOM | 5357 | CA  | LEU | 689 | 50.804 | 1.512  | 19.461 | 1.00 | 26.14 |
| ATOM | 5358 | CB  | LEU | 689 | 52.268 | 1.688  | 19.911 | 1.00 | 27.31 |
| ATOM | 5359 | CG  | LEU | 689 | 53.368 | 1.014  | 19.065 | 1.00 | 26.60 |
| ATOM | 5360 | CD1 | LEU | 689 | 54.688 | 1.767  | 19.175 | 1.00 | 28.19 |
| ATOM | 5361 | CD2 | LEU | 689 | 53.567 | -0.401 | 19.475 | 1.00 | 25.55 |
| ATOM | 5362 | C   | LEU | 689 | 50.362 | 0.053  | 19.605 | 1.00 | 26.48 |
| ATOM | 5363 | O   | LEU | 689 | 50.377 | -0.686 | 18.626 | 1.00 | 27.06 |
| ATOM | 5364 | N   | LEU | 690 | 49.953 | -0.344 | 20.816 | 1.00 | 28.55 |
| ATOM | 5366 | CA  | LEU | 690 | 49.465 | -1.708 | 21.085 | 1.00 | 29.16 |
| ATOM | 5367 | CB  | LEU | 690 | 49.070 | -1.888 | 22.560 | 1.00 | 31.40 |
| ATOM | 5368 | CG  | LEU | 690 | 50.114 | -2.085 | 23.667 | 1.00 | 31.49 |
| ATOM | 5369 | CD1 | LEU | 690 | 49.427 | -2.028 | 25.026 | 1.00 | 34.09 |
| ATOM | 5370 | CD2 | LEU | 690 | 50.821 | -3.410 | 23.491 | 1.00 | 30.84 |
| ATOM | 5371 | C   | LEU | 690 | 48.240 | -1.958 | 20.220 | 1.00 | 26.51 |
| ATOM | 5372 | O   | LEU | 690 | 48.088 | -3.023 | 19.631 | 1.00 | 25.15 |
| ATOM | 5373 | N   | TRP | 691 | 47.376 | -0.954 | 20.139 | 1.00 | 28.51 |
| ATOM | 5375 | CA  | TRP | 691 | 46.169 | -1.049 | 19.319 | 1.00 | 29.56 |
| ATOM | 5376 | CB  | TRP | 691 | 45.332 | 0.227  | 19.465 | 1.00 | 28.91 |
| ATOM | 5377 | CG  | TRP | 691 | 43.992 | 0.169  | 18.759 | 1.00 | 30.95 |
| ATOM | 5378 | CD2 | TRP | 691 | 43.718 | 0.556  | 17.406 | 1.00 | 29.87 |
| ATOM | 5379 | CE2 | TRP | 691 | 42.337 | 0.367  | 17.189 | 1.00 | 31.97 |
| ATOM | 5380 | CE3 | TRP | 691 | 44.505 | 1.049  | 16.358 | 1.00 | 27.72 |
| ATOM | 5381 | CD1 | TRP | 691 | 42.796 | -0.231 | 19.292 | 1.00 | 30.68 |
| ATOM | 5382 | NE1 | TRP | 691 | 41.797 | -0.111 | 18.355 | 1.00 | 33.68 |
| ATOM | 5384 | CZ2 | TRP | 691 | 41.729 | 0.652  | 15.967 | 1.00 | 29.42 |
| ATOM | 5385 | CZ3 | TRP | 691 | 43.906 | 1.327  | 15.154 | 1.00 | 27.13 |
| ATOM | 5386 | CH2 | TRP | 691 | 42.523 | 1.129  | 14.965 | 1.00 | 29.18 |
| ATOM | 5387 | C   | TRP | 691 | 46.564 | -1.289 | 17.856 | 1.00 | 28.78 |
| ATOM | 5388 | O   | TRP | 691 | 45.996 | -2.156 | 17.194 | 1.00 | 27.64 |
| ATOM | 5389 | N   | GLU | 692 | 47.564 | -0.543 | 17.380 | 1.00 | 29.83 |
| ATOM | 5391 | CA  | GLU | 692 | 48.078 | -0.669 | 16.018 | 1.00 | 28.08 |
| ATOM | 5392 | CB  | GLU | 692 | 49.267 | 0.262  | 15.790 | 1.00 | 26.40 |
| ATOM | 5393 | CG  | GLU | 692 | 48.945 | 1.735  | 15.680 | 1.00 | 26.45 |
| ATOM | 5394 | CD  | GLU | 692 | 50.183 | 2.561  | 15.369 | 1.00 | 29.47 |
| ATOM | 5395 | OE1 | GLU | 692 | 50.938 | 2.886  | 16.320 | 1.00 | 29.66 |
| ATOM | 5396 | OE2 | GLU | 692 | 50.413 | 2.875  | 14.182 | 1.00 | 29.44 |
| ATOM | 5397 | C   | GLU | 692 | 48.563 | -2.082 | 15.761 | 1.00 | 30.07 |
| ATOM | 5398 | O   | GLU | 692 | 48.385 | -2.612 | 14.665 | 1.00 | 30.18 |
| ATOM | 5399 | N   | ILE | 693 | 49.244 | -2.663 | 16.746 | 1.00 | 29.87 |
| ATOM | 5401 | CA  | ILE | 693 | 49.754 | -4.024 | 16.608 | 1.00 | 29.51 |
| ATOM | 5402 | CB  | ILE | 693 | 50.632 | -4.443 | 17.828 | 1.00 | 28.18 |
| ATOM | 5403 | CG2 | ILE | 693 | 51.037 | -5.907 | 17.706 | 1.00 | 27.45 |
| ATOM | 5404 | CG1 | ILE | 693 | 51.907 | -3.594 | 17.890 | 1.00 | 26.99 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5405 | CD1 | ILE | 693 | 52.663 | -3.747 | 19.194 | 1.00 | 25.37 |
| ATOM | 5406 | C   | ILE | 693 | 48.603 | -5.023 | 16.452 | 1.00 | 29.21 |
| ATOM | 5407 | O   | ILE | 693 | 48.568 | -5.807 | 15.512 | 1.00 | 27.89 |
| ATOM | 5408 | N   | PHE | 694 | 47.623 | -4.942 | 17.336 | 1.00 | 31.33 |
| ATOM | 5410 | CA  | PHE | 694 | 46.523 | -5.888 | 17.279 | 1.00 | 34.41 |
| ATOM | 5411 | CB  | PHE | 694 | 45.958 | -6.114 | 18.687 | 1.00 | 35.37 |
| ATOM | 5412 | CG  | PHE | 694 | 46.978 | -6.717 | 19.621 | 1.00 | 35.60 |
| ATOM | 5413 | CD1 | PHE | 694 | 47.606 | -5.942 | 20.586 | 1.00 | 37.23 |
| ATOM | 5414 | CD2 | PHE | 694 | 47.424 | -8.024 | 19.426 | 1.00 | 35.59 |
| ATOM | 5415 | CE1 | PHE | 694 | 48.669 | -6.460 | 21.333 | 1.00 | 36.39 |
| ATOM | 5416 | CE2 | PHE | 694 | 48.484 | -8.546 | 20.170 | 1.00 | 35.34 |
| ATOM | 5417 | CZ  | PHE | 694 | 49.110 | -7.762 | 21.118 | 1.00 | 35.71 |
| ATOM | 5418 | C   | PHE | 694 | 45.481 | -5.715 | 16.176 | 1.00 | 34.41 |
| ATOM | 5419 | O   | PHE | 694 | 44.623 | -6.579 | 15.982 | 1.00 | 34.48 |
| ATOM | 5420 | N   | THR | 695 | 45.617 | -4.637 | 15.404 | 1.00 | 33.03 |
| ATOM | 5422 | CA  | THR | 695 | 44.742 | -4.379 | 14.263 | 1.00 | 31.81 |
| ATOM | 5423 | CB  | THR | 695 | 44.113 | -2.957 | 14.278 | 1.00 | 29.75 |
| ATOM | 5424 | OG1 | THR | 695 | 45.142 | -1.961 | 14.218 | 1.00 | 30.72 |
| ATOM | 5426 | CG2 | THR | 695 | 43.254 | -2.759 | 15.524 | 1.00 | 29.40 |
| ATOM | 5427 | C   | THR | 695 | 45.596 | -4.533 | 13.011 | 1.00 | 31.44 |
| ATOM | 5428 | O   | THR | 695 | 45.153 | -4.241 | 11.906 | 1.00 | 33.00 |
| ATOM | 5429 | N   | LEU | 696 | 46.832 | -4.987 | 13.209 | 1.00 | 31.24 |
| ATOM | 5431 | CA  | LEU | 696 | 47.799 | -5.199 | 12.134 | 1.00 | 31.36 |
| ATOM | 5432 | CB  | LEU | 696 | 47.421 | -6.418 | 11.291 | 1.00 | 33.53 |
| ATOM | 5433 | CG  | LEU | 696 | 47.270 | -7.741 | 12.042 | 1.00 | 33.00 |
| ATOM | 5434 | CD1 | LEU | 696 | 47.010 | -8.838 | 11.052 | 1.00 | 35.50 |
| ATOM | 5435 | CD2 | LEU | 696 | 48.515 | -8.061 | 12.830 | 1.00 | 36.09 |
| ATOM | 5436 | C   | LEU | 696 | 48.066 | -3.976 | 11.249 | 1.00 | 30.84 |
| ATOM | 5437 | O   | LEU | 696 | 48.135 | -4.067 | 10.024 | 1.00 | 28.23 |
| ATOM | 5438 | N   | GLY | 697 | 48.302 | -2.839 | 11.890 | 1.00 | 31.54 |
| ATOM | 5440 | CA  | GLY | 697 | 48.591 | -1.632 | 11.141 | 1.00 | 33.87 |
| ATOM | 5441 | C   | GLY | 697 | 47.375 | -0.765 | 10.924 | 1.00 | 32.77 |
| ATOM | 5442 | O   | GLY | 697 | 47.322 | 0.042  | 9.994  | 1.00 | 33.90 |
| ATOM | 5443 | N   | GLY | 698 | 46.392 | -0.921 | 11.797 | 1.00 | 33.29 |
| ATOM | 5445 | CA  | GLY | 698 | 45.187 | -0.122 | 11.681 | 1.00 | 32.66 |
| ATOM | 5446 | C   | GLY | 698 | 45.408 | 1.368  | 11.877 | 1.00 | 30.57 |
| ATOM | 5447 | O   | GLY | 698 | 46.336 | 1.803  | 12.553 | 1.00 | 27.36 |
| ATOM | 5448 | N   | SER | 699 | 44.517 | 2.148  | 11.285 | 1.00 | 30.92 |
| ATOM | 5450 | CA  | SER | 699 | 44.552 | 3.595  | 11.376 | 1.00 | 32.19 |
| ATOM | 5451 | CB  | SER | 699 | 44.062 | 4.202  | 10.058 | 1.00 | 34.24 |
| ATOM | 5452 | OG  | SER | 699 | 44.019 | 5.616  | 10.123 | 1.00 | 38.67 |
| ATOM | 5454 | C   | SER | 699 | 43.644 | 4.014  | 12.538 | 1.00 | 31.81 |
| ATOM | 5455 | O   | SER | 699 | 42.431 | 3.759  | 12.525 | 1.00 | 31.39 |
| ATOM | 5456 | N   | PRO | 700 | 44.228 | 4.597  | 13.594 | 1.00 | 31.82 |
| ATOM | 5457 | CD  | PRO | 700 | 45.645 | 4.842  | 13.919 | 1.00 | 28.82 |
| ATOM | 5458 | CA  | PRO | 700 | 43.353 | 4.992  | 14.697 | 1.00 | 31.31 |
| ATOM | 5459 | CB  | PRO | 700 | 44.345 | 5.341  | 15.809 | 1.00 | 31.31 |
| ATOM | 5460 | CG  | PRO | 700 | 45.552 | 5.800  | 15.061 | 1.00 | 30.41 |
| ATOM | 5461 | C   | PRO | 700 | 42.484 | 6.170  | 14.295 | 1.00 | 31.19 |
| ATOM | 5462 | O   | PRO | 700 | 42.899 | 7.021  | 13.510 | 1.00 | 29.93 |
| ATOM | 5463 | N   | TYR | 701 | 41.235 | 6.144  | 14.736 | 1.00 | 32.69 |
| ATOM | 5465 | CA  | TYR | 701 | 40.291 | 7.223  | 14.445 | 1.00 | 32.54 |
| ATOM | 5466 | CB  | TYR | 701 | 40.650 | 8.416  | 15.323 | 1.00 | 34.47 |
| ATOM | 5467 | CG  | TYR | 701 | 40.512 | 8.141  | 16.794 | 1.00 | 39.16 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5468 | CD1 | TYR | 701 | 41.542 | 8.433  | 17.683 | 1.00 | 44.31 |
| ATOM | 5469 | CE1 | TYR | 701 | 41.372 | 8.241  | 19.060 | 1.00 | 46.65 |
| ATOM | 5470 | CD2 | TYR | 701 | 39.321 | 7.642  | 17.307 | 1.00 | 41.21 |
| ATOM | 5471 | CE2 | TYR | 701 | 39.147 | 7.447  | 18.657 | 1.00 | 45.05 |
| ATOM | 5472 | CZ  | TYR | 701 | 40.164 | 7.750  | 19.535 | 1.00 | 47.24 |
| ATOM | 5473 | OH  | TYR | 701 | 39.949 | 7.590  | 20.886 | 1.00 | 52.18 |
| ATOM | 5475 | C   | TYR | 701 | 40.215 | 7.655  | 12.972 | 1.00 | 30.56 |
| ATOM | 5476 | O   | TYR | 701 | 40.379 | 8.836  | 12.647 | 1.00 | 29.73 |
| ATOM | 5477 | N   | PRO | 702 | 39.928 | 6.712  | 12.058 | 1.00 | 30.38 |
| ATOM | 5478 | CD  | PRO | 702 | 39.659 | 5.278  | 12.261 | 1.00 | 30.22 |
| ATOM | 5479 | CA  | PRO | 702 | 39.847 | 7.071  | 10.642 | 1.00 | 28.87 |
| ATOM | 5480 | CB  | PRO | 702 | 39.693 | 5.722  | 9.948  | 1.00 | 29.63 |
| ATOM | 5481 | CG  | PRO | 702 | 39.007 | 4.889  | 10.959 | 1.00 | 30.99 |
| ATOM | 5482 | C   | PRO | 702 | 38.722 | 8.048  | 10.283 | 1.00 | 30.88 |
| ATOM | 5483 | O   | PRO | 702 | 37.557 | 7.843  | 10.636 | 1.00 | 33.98 |
| ATOM | 5484 | N   | GLY | 703 | 39.100 | 9.116  | 9.584  | 1.00 | 29.03 |
| ATOM | 5486 | CA  | GLY | 703 | 38.154 | 10.134 | 9.169  | 1.00 | 28.98 |
| ATOM | 5487 | C   | GLY | 703 | 37.893 | 11.169 | 10.244 | 1.00 | 29.69 |
| ATOM | 5488 | O   | GLY | 703 | 37.074 | 12.068 | 10.048 | 1.00 | 31.71 |
| ATOM | 5489 | N   | VAL | 704 | 38.579 | 11.040 | 11.378 | 1.00 | 30.74 |
| ATOM | 5491 | CA  | VAL | 704 | 38.416 | 11.951 | 12.509 | 1.00 | 32.06 |
| ATOM | 5492 | CB  | VAL | 704 | 38.582 | 11.208 | 13.860 | 1.00 | 31.70 |
| ATOM | 5493 | CG1 | VAL | 704 | 38.522 | 12.197 | 15.044 | 1.00 | 30.29 |
| ATOM | 5494 | CG2 | VAL | 704 | 37.506 | 10.144 | 14.005 | 1.00 | 31.56 |
| ATOM | 5495 | C   | VAL | 704 | 39.430 | 13.087 | 12.449 | 1.00 | 33.72 |
| ATOM | 5496 | O   | VAL | 704 | 40.634 | 12.867 | 12.548 | 1.00 | 35.31 |
| ATOM | 5497 | N   | PRO | 705 | 38.957 | 14.309 | 12.200 | 1.00 | 34.23 |
| ATOM | 5498 | CD  | PRO | 705 | 37.594 | 14.692 | 11.787 | 1.00 | 33.20 |
| ATOM | 5499 | CA  | PRO | 705 | 39.875 | 15.443 | 12.135 | 1.00 | 33.73 |
| ATOM | 5500 | CB  | PRO | 705 | 39.053 | 16.495 | 11.394 | 1.00 | 34.93 |
| ATOM | 5501 | CG  | PRO | 705 | 37.647 | 16.187 | 11.831 | 1.00 | 36.93 |
| ATOM | 5502 | C   | PRO | 705 | 40.280 | 15.879 | 13.543 | 1.00 | 33.25 |
| ATOM | 5503 | O   | PRO | 705 | 39.651 | 15.490 | 14.532 | 1.00 | 31.71 |
| ATOM | 5504 | N   | VAL | 706 | 41.322 | 16.697 | 13.623 | 1.00 | 34.46 |
| ATOM | 5506 | CA  | VAL | 706 | 41.852 | 17.176 | 14.900 | 1.00 | 36.99 |
| ATOM | 5507 | CB  | VAL | 706 | 42.923 | 18.261 | 14.687 | 1.00 | 39.01 |
| ATOM | 5508 | CG1 | VAL | 706 | 43.577 | 18.618 | 16.017 | 1.00 | 40.33 |
| ATOM | 5509 | CG2 | VAL | 706 | 43.961 | 17.786 | 13.673 | 1.00 | 38.61 |
| ATOM | 5510 | C   | VAL | 706 | 40.826 | 17.716 | 15.895 | 1.00 | 35.65 |
| ATOM | 5511 | O   | VAL | 706 | 40.823 | 17.319 | 17.065 | 1.00 | 33.55 |
| ATOM | 5512 | N   | GLU | 707 | 39.955 | 18.605 | 15.426 | 1.00 | 36.74 |
| ATOM | 5514 | CA  | GLU | 707 | 38.941 | 19.220 | 16.278 | 1.00 | 37.20 |
| ATOM | 5515 | CB  | GLU | 707 | 38.129 | 20.242 | 15.482 | 1.00 | 38.98 |
| ATOM | 5516 | C   | GLU | 707 | 38.014 | 18.188 | 16.900 | 1.00 | 38.46 |
| ATOM | 5517 | O   | GLU | 707 | 37.634 | 18.295 | 18.074 | 1.00 | 39.04 |
| ATOM | 5518 | N   | GLU | 708 | 37.681 | 17.170 | 16.115 | 1.00 | 37.81 |
| ATOM | 5520 | CA  | GLU | 708 | 36.802 | 16.105 | 16.571 | 1.00 | 37.70 |
| ATOM | 5521 | CB  | GLU | 708 | 36.316 | 15.289 | 15.378 | 1.00 | 40.73 |
| ATOM | 5522 | CG  | GLU | 708 | 35.459 | 16.091 | 14.413 | 1.00 | 43.44 |
| ATOM | 5523 | CD  | GLU | 708 | 34.235 | 16.677 | 15.084 | 1.00 | 51.52 |
| ATOM | 5524 | OE1 | GLU | 708 | 33.629 | 16.007 | 15.961 | 1.00 | 50.14 |
| ATOM | 5525 | OE2 | GLU | 708 | 33.882 | 17.824 | 14.732 | 1.00 | 59.46 |
| ATOM | 5526 | C   | GLU | 708 | 37.506 | 15.223 | 17.588 | 1.00 | 36.53 |
| ATOM | 5527 | O   | GLU | 708 | 36.897 | 14.782 | 18.567 | 1.00 | 36.80 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5528 | N   | LEU | 709 | 38.799 | 14.993 | 17.376 | 1.00 | 35.69 |
| ATOM | 5530 | CA  | LEU | 709 | 39.584 | 14.179 | 18.301 | 1.00 | 35.48 |
| ATOM | 5531 | CB  | LEU | 709 | 41.039 | 14.044 | 17.830 | 1.00 | 34.84 |
| ATOM | 5532 | CG  | LEU | 709 | 41.921 | 13.250 | 18.802 | 1.00 | 32.41 |
| ATOM | 5533 | CD1 | LEU | 709 | 41.608 | 11.787 | 18.674 | 1.00 | 30.10 |
| ATOM | 5534 | CD2 | LEU | 709 | 43.378 | 13.514 | 18.560 | 1.00 | 29.93 |
| ATOM | 5535 | C   | LEU | 709 | 39.568 | 14.842 | 19.673 | 1.00 | 35.58 |
| ATOM | 5536 | O   | LEU | 709 | 39.377 | 14.177 | 20.694 | 1.00 | 35.43 |
| ATOM | 5537 | N   | PHE | 710 | 39.792 | 16.150 | 19.686 | 1.00 | 36.79 |
| ATOM | 5539 | CA  | PHE | 710 | 39.800 | 16.918 | 20.927 | 1.00 | 40.58 |
| ATOM | 5540 | CB  | PHE | 710 | 39.944 | 18.413 | 20.637 | 1.00 | 42.55 |
| ATOM | 5541 | CG  | PHE | 710 | 41.308 | 18.808 | 20.162 | 1.00 | 46.38 |
| ATOM | 5542 | CD1 | PHE | 710 | 42.392 | 17.942 | 20.313 | 1.00 | 47.29 |
| ATOM | 5543 | CD2 | PHE | 710 | 41.515 | 20.050 | 19.580 | 1.00 | 47.93 |
| ATOM | 5544 | CE1 | PHE | 710 | 43.659 | 18.312 | 19.892 | 1.00 | 51.21 |
| ATOM | 5545 | CE2 | PHE | 710 | 42.781 | 20.435 | 19.155 | 1.00 | 50.89 |
| ATOM | 5546 | CZ  | PHE | 710 | 43.859 | 19.562 | 19.312 | 1.00 | 53.31 |
| ATOM | 5547 | C   | PHE | 710 | 38.517 | 16.676 | 21.694 | 1.00 | 40.14 |
| ATOM | 5548 | O   | PHE | 710 | 38.543 | 16.446 | 22.898 | 1.00 | 39.86 |
| ATOM | 5549 | N   | LYS | 711 | 37.399 | 16.705 | 20.977 | 1.00 | 41.02 |
| ATOM | 5551 | CA  | LYS | 711 | 36.101 | 16.479 | 21.584 | 1.00 | 38.66 |
| ATOM | 5552 | CB  | LYS | 711 | 34.985 | 16.803 | 20.580 | 1.00 | 40.75 |
| ATOM | 5553 | CG  | LYS | 711 | 33.601 | 16.727 | 21.181 | 1.00 | 46.99 |
| ATOM | 5554 | CD  | LYS | 711 | 32.522 | 17.174 | 20.218 | 1.00 | 50.71 |
| ATOM | 5555 | CE  | LYS | 711 | 31.163 | 16.733 | 20.739 | 1.00 | 52.53 |
| ATOM | 5556 | NZ  | LYS | 711 | 30.041 | 17.194 | 19.884 | 1.00 | 57.76 |
| ATOM | 5560 | C   | LYS | 711 | 35.990 | 15.046 | 22.120 | 1.00 | 38.06 |
| ATOM | 5561 | O   | LYS | 711 | 35.535 | 14.831 | 23.250 | 1.00 | 36.29 |
| ATOM | 5562 | N   | LEU | 712 | 36.431 | 14.066 | 21.330 | 1.00 | 38.10 |
| ATOM | 5564 | CA  | LEU | 712 | 36.392 | 12.662 | 21.764 | 1.00 | 38.69 |
| ATOM | 5565 | CB  | LEU | 712 | 36.914 | 11.714 | 20.672 | 1.00 | 37.19 |
| ATOM | 5566 | CG  | LEU | 712 | 36.070 | 11.436 | 19.424 | 1.00 | 34.73 |
| ATOM | 5567 | CD1 | LEU | 712 | 36.814 | 10.453 | 18.524 | 1.00 | 35.54 |
| ATOM | 5568 | CD2 | LEU | 712 | 34.709 | 10.872 | 19.818 | 1.00 | 30.90 |
| ATOM | 5569 | C   | LEU | 712 | 37.230 | 12.472 | 23.021 | 1.00 | 39.62 |
| ATOM | 5570 | O   | LEU | 712 | 36.843 | 11.745 | 23.940 | 1.00 | 39.44 |
| ATOM | 5571 | N   | LEU | 713 | 38.398 | 13.101 | 23.044 | 1.00 | 40.10 |
| ATOM | 5573 | CA  | LEU | 713 | 39.279 | 12.999 | 24.199 | 1.00 | 42.81 |
| ATOM | 5574 | CB  | LEU | 713 | 40.606 | 13.716 | 23.924 | 1.00 | 41.70 |
| ATOM | 5575 | CG  | LEU | 713 | 41.495 | 13.040 | 22.868 | 1.00 | 41.86 |
| ATOM | 5576 | CD1 | LEU | 713 | 42.742 | 13.862 | 22.607 | 1.00 | 37.19 |
| ATOM | 5577 | CD2 | LEU | 713 | 41.873 | 11.647 | 23.340 | 1.00 | 41.17 |
| ATOM | 5578 | C   | LEU | 713 | 38.577 | 13.566 | 25.437 | 1.00 | 43.18 |
| ATOM | 5579 | O   | LEU | 713 | 38.479 | 12.889 | 26.457 | 1.00 | 44.79 |
| ATOM | 5580 | N   | LYS | 714 | 38.004 | 14.760 | 25.312 | 1.00 | 42.75 |
| ATOM | 5582 | CA  | LYS | 714 | 37.301 | 15.389 | 26.425 | 1.00 | 43.70 |
| ATOM | 5583 | CB  | LYS | 714 | 36.842 | 16.796 | 26.043 | 1.00 | 44.69 |
| ATOM | 5584 | CG  | LYS | 714 | 38.001 | 17.746 | 25.836 | 1.00 | 47.92 |
| ATOM | 5585 | CD  | LYS | 714 | 37.543 | 19.171 | 25.583 | 1.00 | 55.01 |
| ATOM | 5586 | CE  | LYS | 714 | 38.733 | 20.077 | 25.238 | 1.00 | 59.44 |
| ATOM | 5587 | NZ  | LYS | 714 | 39.773 | 20.132 | 26.320 | 1.00 | 60.10 |
| ATOM | 5591 | C   | LYS | 714 | 36.127 | 14.557 | 26.940 | 1.00 | 43.94 |
| ATOM | 5592 | O   | LYS | 714 | 35.843 | 14.551 | 28.140 | 1.00 | 44.20 |
| ATOM | 5593 | N   | GLU | 715 | 35.477 | 13.819 | 26.046 | 1.00 | 43.29 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5595 | CA  | GLU | 715 | 34.350 | 12.979 | 26.435 | 1.00 | 42.29 |
| ATOM | 5596 | CB  | GLU | 715 | 33.464 | 12.682 | 25.225 | 1.00 | 44.91 |
| ATOM | 5597 | CG  | GLU | 715 | 32.913 | 13.916 | 24.522 | 1.00 | 51.62 |
| ATOM | 5598 | CD  | GLU | 715 | 32.020 | 13.566 | 23.332 | 1.00 | 55.01 |
| ATOM | 5599 | OE1 | GLU | 715 | 32.343 | 12.605 | 22.596 | 1.00 | 58.09 |
| ATOM | 5600 | OE2 | GLU | 715 | 30.992 | 14.251 | 23.136 | 1.00 | 55.83 |
| ATOM | 5601 | C   | GLU | 715 | 34.806 | 11.665 | 27.064 | 1.00 | 41.07 |
| ATOM | 5602 | O   | GLU | 715 | 33.982 | 10.825 | 27.421 | 1.00 | 38.01 |
| ATOM | 5603 | N   | GLY | 716 | 36.118 | 11.476 | 27.182 | 1.00 | 41.11 |
| ATOM | 5605 | CA  | GLY | 716 | 36.642 | 10.252 | 27.770 | 1.00 | 39.69 |
| ATOM | 5606 | C   | GLY | 716 | 36.510 | 9.054  | 26.847 | 1.00 | 39.64 |
| ATOM | 5607 | O   | GLY | 716 | 36.562 | 7.904  | 27.290 | 1.00 | 36.71 |
| ATOM | 5608 | N   | HIS | 717 | 36.359 | 9.335  | 25.554 | 1.00 | 41.95 |
| ATOM | 5610 | CA  | HIS | 717 | 36.215 | 8.300  | 24.541 | 1.00 | 43.32 |
| ATOM | 5611 | CB  | HIS | 717 | 35.859 | 8.918  | 23.183 | 1.00 | 43.38 |
| ATOM | 5612 | CG  | HIS | 717 | 35.813 | 7.926  | 22.060 | 1.00 | 44.79 |
| ATOM | 5613 | CD2 | HIS | 717 | 34.802 | 7.152  | 21.596 | 1.00 | 44.64 |
| ATOM | 5614 | ND1 | HIS | 717 | 36.912 | 7.625  | 21.285 | 1.00 | 46.21 |
| ATOM | 5616 | CE1 | HIS | 717 | 36.584 | 6.708  | 20.392 | 1.00 | 46.21 |
| ATOM | 5617 | NE2 | HIS | 717 | 35.307 | 6.404  | 20.561 | 1.00 | 45.55 |
| ATOM | 5619 | C   | HIS | 717 | 37.485 | 7.481  | 24.403 | 1.00 | 43.90 |
| ATOM | 5620 | O   | HIS | 717 | 38.581 | 8.031  | 24.327 | 1.00 | 45.45 |
| ATOM | 5621 | N   | ARG | 718 | 37.304 | 6.169  | 24.289 | 1.00 | 43.44 |
| ATOM | 5623 | CA  | ARG | 718 | 38.387 | 5.207  | 24.139 | 1.00 | 42.68 |
| ATOM | 5624 | CB  | ARG | 718 | 38.500 | 4.361  | 25.412 | 1.00 | 41.00 |
| ATOM | 5625 | CG  | ARG | 718 | 38.844 | 5.165  | 26.658 | 1.00 | 40.09 |
| ATOM | 5626 | CD  | ARG | 718 | 40.214 | 5.825  | 26.495 | 1.00 | 41.06 |
| ATOM | 5627 | NE  | ARG | 718 | 40.658 | 6.549  | 27.685 | 1.00 | 39.51 |
| ATOM | 5629 | CZ  | ARG | 718 | 40.521 | 7.861  | 27.862 | 1.00 | 39.90 |
| ATOM | 5630 | NH1 | ARG | 718 | 39.940 | 8.608  | 26.931 | 1.00 | 36.48 |
| ATOM | 5633 | NH2 | ARG | 718 | 41.024 | 8.443  | 28.946 | 1.00 | 42.06 |
| ATOM | 5636 | C   | ARG | 718 | 38.080 | 4.308  | 22.927 | 1.00 | 43.91 |
| ATOM | 5637 | O   | ARG | 718 | 36.911 | 4.007  | 22.650 | 1.00 | 44.40 |
| ATOM | 5638 | N   | MET | 719 | 39.113 | 3.933  | 22.174 | 1.00 | 42.56 |
| ATOM | 5640 | CA  | MET | 719 | 38.928 | 3.079  | 21.004 | 1.00 | 42.82 |
| ATOM | 5641 | CB  | MET | 719 | 40.219 | 2.964  | 20.181 | 1.00 | 42.59 |
| ATOM | 5642 | CG  | MET | 719 | 40.595 | 4.221  | 19.413 | 1.00 | 41.15 |
| ATOM | 5643 | SD  | MET | 719 | 42.093 | 4.079  | 18.400 | 1.00 | 44.11 |
| ATOM | 5644 | CE  | MET | 719 | 43.323 | 3.949  | 19.613 | 1.00 | 41.33 |
| ATOM | 5645 | C   | MET | 719 | 38.460 | 1.694  | 21.432 | 1.00 | 44.74 |
| ATOM | 5646 | O   | MET | 719 | 38.822 | 1.216  | 22.516 | 1.00 | 41.56 |
| ATOM | 5647 | N   | ASP | 720 | 37.635 | 1.075  | 20.582 | 1.00 | 45.50 |
| ATOM | 5649 | CA  | ASP | 720 | 37.090 | -0.265 | 20.824 | 1.00 | 45.51 |
| ATOM | 5650 | CB  | ASP | 720 | 36.077 | -0.660 | 19.733 | 1.00 | 48.60 |
| ATOM | 5651 | CG  | ASP | 720 | 34.811 | 0.181  | 19.749 | 1.00 | 53.03 |
| ATOM | 5652 | OD1 | ASP | 720 | 34.678 | 1.082  | 20.612 | 1.00 | 59.61 |
| ATOM | 5653 | OD2 | ASP | 720 | 33.943 | -0.067 | 18.880 | 1.00 | 50.58 |
| ATOM | 5654 | C   | ASP | 720 | 38.177 | -1.329 | 20.823 | 1.00 | 43.64 |
| ATOM | 5655 | O   | ASP | 720 | 39.235 | -1.172 | 20.199 | 1.00 | 43.66 |
| ATOM | 5656 | N   | LYS | 721 | 37.876 | -2.436 | 21.487 | 1.00 | 42.90 |
| ATOM | 5658 | CA  | LYS | 721 | 38.784 | -3.565 | 21.555 | 1.00 | 42.96 |
| ATOM | 5659 | CB  | LYS | 721 | 38.278 | -4.565 | 22.587 | 1.00 | 42.51 |
| ATOM | 5660 | CG  | LYS | 721 | 39.000 | -5.888 | 22.570 | 1.00 | 47.68 |
| ATOM | 5661 | CD  | LYS | 721 | 38.445 | -6.805 | 23.628 | 1.00 | 51.61 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 5662 | CE  | LYS | 721 | 38.450 | -8.246  | 23.163 | 1.00 | 54.96 |
| ATOM | 5663 | NZ  | LYS | 721 | 38.165 | -9.190  | 24.282 | 1.00 | 59.67 |
| ATOM | 5667 | C   | LYS | 721 | 38.825 | -4.215  | 20.182 | 1.00 | 43.05 |
| ATOM | 5668 | O   | LYS | 721 | 37.779 | -4.577  | 19.625 | 1.00 | 46.08 |
| ATOM | 5669 | N   | PRO | 722 | 40.025 | -4.348  | 19.601 | 1.00 | 43.22 |
| ATOM | 5670 | CD  | PRO | 722 | 41.337 | -3.872  | 20.067 | 1.00 | 43.52 |
| ATOM | 5671 | CA  | PRO | 722 | 40.139 | -4.968  | 18.275 | 1.00 | 41.04 |
| ATOM | 5672 | CB  | PRO | 722 | 41.631 | -4.856  | 17.965 | 1.00 | 40.87 |
| ATOM | 5673 | CG  | PRO | 722 | 42.074 | -3.682  | 18.764 | 1.00 | 42.22 |
| ATOM | 5674 | C   | PRO | 722 | 39.726 | -6.427  | 18.346 | 1.00 | 39.64 |
| ATOM | 5675 | O   | PRO | 722 | 39.730 | -7.023  | 19.425 | 1.00 | 37.12 |
| ATOM | 5676 | N   | SER | 723 | 39.311 | -6.982  | 17.212 | 1.00 | 40.36 |
| ATOM | 5678 | CA  | SER | 723 | 38.947 | -8.389  | 17.158 | 1.00 | 41.41 |
| ATOM | 5679 | CB  | SER | 723 | 38.205 | -8.707  | 15.865 | 1.00 | 38.26 |
| ATOM | 5680 | OG  | SER | 723 | 39.049 | -8.520  | 14.749 | 1.00 | 43.87 |
| ATOM | 5682 | C   | SER | 723 | 40.294 | -9.102  | 17.191 | 1.00 | 41.54 |
| ATOM | 5683 | O   | SER | 723 | 41.284 | -8.575  | 16.703 | 1.00 | 40.90 |
| ATOM | 5684 | N   | ASN | 724 | 40.338 | -10.300 | 17.750 | 1.00 | 44.89 |
| ATOM | 5686 | CA  | ASN | 724 | 41.598 | -11.019 | 17.853 | 1.00 | 48.14 |
| ATOM | 5687 | CB  | ASN | 724 | 42.256 | -11.202 | 16.476 | 1.00 | 52.43 |
| ATOM | 5688 | CG  | ASN | 724 | 41.682 | -12.374 | 15.715 | 1.00 | 57.29 |
| ATOM | 5689 | OD1 | ASN | 724 | 41.637 | -13.492 | 16.225 | 1.00 | 61.96 |
| ATOM | 5690 | ND2 | ASN | 724 | 41.218 | -12.125 | 14.500 | 1.00 | 60.91 |
| ATOM | 5693 | C   | ASN | 724 | 42.509 | -10.255 | 18.811 | 1.00 | 48.17 |
| ATOM | 5694 | O   | ASN | 724 | 43.648 | -9.918  | 18.495 | 1.00 | 49.88 |
| ATOM | 5695 | N   | CYS | 725 | 41.960 | -9.935  | 19.973 | 1.00 | 47.12 |
| ATOM | 5697 | CA  | CYS | 725 | 42.686 | -9.238  | 21.010 | 1.00 | 46.17 |
| ATOM | 5698 | CB  | CYS | 725 | 42.569 | -7.717  | 20.862 | 1.00 | 44.83 |
| ATOM | 5699 | SG  | CYS | 725 | 43.459 | -6.813  | 22.159 | 1.00 | 42.51 |
| ATOM | 5700 | C   | CYS | 725 | 42.017 | -9.697  | 22.294 | 1.00 | 45.78 |
| ATOM | 5701 | O   | CYS | 725 | 40.803 | -9.642  | 22.423 | 1.00 | 44.83 |
| ATOM | 5702 | N   | THR | 726 | 42.810 | -10.224 | 23.212 | 1.00 | 45.63 |
| ATOM | 5704 | CA  | THR | 726 | 42.289 | -10.711 | 24.482 | 1.00 | 45.47 |
| ATOM | 5705 | CB  | THR | 726 | 43.351 | -11.545 | 25.217 | 1.00 | 45.93 |
| ATOM | 5706 | OG1 | THR | 726 | 44.307 | -10.651 | 25.786 | 1.00 | 45.04 |
| ATOM | 5708 | CG2 | THR | 726 | 44.061 | -12.495 | 24.233 | 1.00 | 42.99 |
| ATOM | 5709 | C   | THR | 726 | 41.858 | -9.545  | 25.359 | 1.00 | 45.73 |
| ATOM | 5710 | O   | THR | 726 | 42.368 | -8.445  | 25.216 | 1.00 | 46.91 |
| ATOM | 5711 | N   | ASN | 727 | 40.914 | -9.789  | 26.257 | 1.00 | 45.93 |
| ATOM | 5713 | CA  | ASN | 727 | 40.448 | -8.736  | 27.141 | 1.00 | 47.85 |
| ATOM | 5714 | CB  | ASN | 727 | 39.300 | -9.237  | 28.022 | 1.00 | 54.88 |
| ATOM | 5715 | CG  | ASN | 727 | 39.629 | -10.544 | 28.731 | 1.00 | 65.11 |
| ATOM | 5716 | OD1 | ASN | 727 | 40.737 | -10.734 | 29.229 | 1.00 | 70.58 |
| ATOM | 5717 | ND2 | ASN | 727 | 38.681 | -11.472 | 28.735 | 1.00 | 69.68 |
| ATOM | 5720 | C   | ASN | 727 | 41.591 | -8.212  | 27.999 | 1.00 | 44.18 |
| ATOM | 5721 | O   | ASN | 727 | 41.594 | -7.047  | 28.390 | 1.00 | 41.35 |
| ATOM | 5722 | N   | GLU | 728 | 42.572 | -9.073  | 28.260 | 1.00 | 42.82 |
| ATOM | 5724 | CA  | GLU | 728 | 43.725 | -8.713  | 29.071 | 1.00 | 42.37 |
| ATOM | 5725 | CB  | GLU | 728 | 44.573 | -9.952  | 29.379 | 1.00 | 43.09 |
| ATOM | 5726 | CG  | GLU | 728 | 45.806 | -9.654  | 30.245 | 1.00 | 48.30 |
| ATOM | 5727 | CD  | GLU | 728 | 46.643 | -10.889 | 30.568 | 1.00 | 50.11 |
| ATOM | 5728 | OE1 | GLU | 728 | 46.867 | -11.732 | 29.668 | 1.00 | 47.98 |
| ATOM | 5729 | OE2 | GLU | 728 | 47.085 | -11.010 | 31.733 | 1.00 | 51.69 |
| ATOM | 5730 | C   | GLU | 728 | 44.551 | -7.652  | 28.356 | 1.00 | 39.57 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5731 | O   | GLU | 728 | 44.852 | -6.605 | 28.933 | 1.00 | 39.30 |
| ATOM | 5732 | N   | LEU | 729 | 44.872 | -7.907 | 27.089 | 1.00 | 37.38 |
| ATOM | 5734 | CA  | LEU | 729 | 45.655 | -6.977 | 26.274 | 1.00 | 36.74 |
| ATOM | 5735 | CB  | LEU | 729 | 46.027 | -7.623 | 24.935 | 1.00 | 35.39 |
| ATOM | 5736 | CG  | LEU | 729 | 47.137 | -8.679 | 25.001 | 1.00 | 35.41 |
| ATOM | 5737 | CD1 | LEU | 729 | 47.107 | -9.553 | 23.766 | 1.00 | 35.69 |
| ATOM | 5738 | CD2 | LEU | 729 | 48.505 | -8.017 | 25.174 | 1.00 | 37.72 |
| ATOM | 5739 | C   | LEU | 729 | 44.885 | -5.679 | 26.050 | 1.00 | 35.52 |
| ATOM | 5740 | O   | LEU | 729 | 45.467 | -4.597 | 25.941 | 1.00 | 33.96 |
| ATOM | 5741 | N   | TYR | 730 | 43.565 | -5.779 | 26.000 | 1.00 | 32.90 |
| ATOM | 5743 | CA  | TYR | 730 | 42.760 | -4.598 | 25.812 | 1.00 | 32.41 |
| ATOM | 5744 | CB  | TYR | 730 | 41.335 | -4.981 | 25.398 | 1.00 | 32.16 |
| ATOM | 5745 | CG  | TYR | 730 | 40.445 | -3.787 | 25.172 | 1.00 | 34.93 |
| ATOM | 5746 | CD1 | TYR | 730 | 40.769 | -2.827 | 24.203 | 1.00 | 32.49 |
| ATOM | 5747 | CE1 | TYR | 730 | 39.962 | -1.716 | 23.994 | 1.00 | 32.80 |
| ATOM | 5748 | CD2 | TYR | 730 | 39.282 | -3.605 | 25.931 | 1.00 | 33.45 |
| ATOM | 5749 | CE2 | TYR | 730 | 38.465 | -2.496 | 25.728 | 1.00 | 34.81 |
| ATOM | 5750 | CZ  | TYR | 730 | 38.814 | -1.557 | 24.756 | 1.00 | 34.06 |
| ATOM | 5751 | OH  | TYR | 730 | 38.009 | -0.465 | 24.551 | 1.00 | 36.66 |
| ATOM | 5753 | C   | TYR | 730 | 42.767 | -3.788 | 27.107 | 1.00 | 33.48 |
| ATOM | 5754 | O   | TYR | 730 | 42.837 | -2.558 | 27.083 | 1.00 | 34.94 |
| ATOM | 5755 | N   | MET | 731 | 42.698 | -4.466 | 28.248 | 1.00 | 35.29 |
| ATOM | 5757 | CA  | MET | 731 | 42.724 | -3.755 | 29.525 | 1.00 | 38.38 |
| ATOM | 5758 | CB  | MET | 731 | 42.465 | -4.709 | 30.690 | 1.00 | 42.01 |
| ATOM | 5759 | CG  | MET | 731 | 41.048 | -5.264 | 30.702 | 1.00 | 53.67 |
| ATOM | 5760 | SD  | MET | 731 | 39.785 | -3.965 | 30.830 | 1.00 | 62.97 |
| ATOM | 5761 | CE  | MET | 731 | 39.828 | -3.688 | 32.641 | 1.00 | 61.83 |
| ATOM | 5762 | C   | MET | 731 | 44.073 | -3.049 | 29.670 | 1.00 | 34.52 |
| ATOM | 5763 | O   | MET | 731 | 44.160 | -1.958 | 30.232 | 1.00 | 33.23 |
| ATOM | 5764 | N   | MET | 732 | 45.118 | -3.669 | 29.134 | 1.00 | 33.93 |
| ATOM | 5766 | CA  | MET | 732 | 46.445 | -3.065 | 29.168 | 1.00 | 36.26 |
| ATOM | 5767 | CB  | MET | 732 | 47.506 | -3.995 | 28.565 | 1.00 | 35.56 |
| ATOM | 5768 | CG  | MET | 732 | 48.935 | -3.418 | 28.643 | 1.00 | 35.26 |
| ATOM | 5769 | SD  | MET | 732 | 50.186 | -4.522 | 28.001 | 1.00 | 30.46 |
| ATOM | 5770 | CE  | MET | 732 | 50.480 | -5.562 | 29.415 | 1.00 | 26.88 |
| ATOM | 5771 | C   | MET | 732 | 46.369 | -1.750 | 28.389 | 1.00 | 34.75 |
| ATOM | 5772 | O   | MET | 732 | 46.827 | -0.722 | 28.873 | 1.00 | 35.49 |
| ATOM | 5773 | N   | MET | 733 | 45.741 | -1.774 | 27.213 | 1.00 | 34.63 |
| ATOM | 5775 | CA  | MET | 733 | 45.571 | -0.566 | 26.413 | 1.00 | 32.79 |
| ATOM | 5776 | CB  | MET | 733 | 44.787 | -0.853 | 25.130 | 1.00 | 33.16 |
| ATOM | 5777 | CG  | MET | 733 | 45.544 | -1.601 | 24.047 | 1.00 | 32.32 |
| ATOM | 5778 | SD  | MET | 733 | 44.421 | -1.990 | 22.670 | 1.00 | 35.66 |
| ATOM | 5779 | CE  | MET | 733 | 45.155 | -3.496 | 22.068 | 1.00 | 29.47 |
| ATOM | 5780 | C   | MET | 733 | 44.789 | 0.452  | 27.229 | 1.00 | 33.94 |
| ATOM | 5781 | O   | MET | 733 | 45.176 | 1.619  | 27.318 | 1.00 | 35.72 |
| ATOM | 5782 | N   | ARG | 734 | 43.679 | 0.018  | 27.818 | 1.00 | 33.73 |
| ATOM | 5784 | CA  | ARG | 734 | 42.854 | 0.913  | 28.621 | 1.00 | 33.41 |
| ATOM | 5785 | CB  | ARG | 734 | 41.586 | 0.197  | 29.095 | 1.00 | 33.42 |
| ATOM | 5786 | CG  | ARG | 734 | 40.726 | -0.335 | 27.950 | 1.00 | 34.26 |
| ATOM | 5787 | CD  | ARG | 734 | 40.256 | 0.783  | 27.043 | 1.00 | 37.70 |
| ATOM | 5788 | NE  | ARG | 734 | 39.416 | 1.745  | 27.750 | 1.00 | 43.98 |
| ATOM | 5790 | CZ  | ARG | 734 | 38.092 | 1.661  | 27.844 | 1.00 | 46.43 |
| ATOM | 5791 | NH1 | ARG | 734 | 37.439 | 0.660  | 27.268 | 1.00 | 48.63 |
| ATOM | 5794 | NH2 | ARG | 734 | 37.420 | 2.571  | 28.530 | 1.00 | 44.65 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5797 | C   | ARG | 734 | 43.660 | 1.458  | 29.793 | 1.00 | 32.12 |
| ATOM | 5798 | O   | ARG | 734 | 43.492 | 2.610  | 30.180 | 1.00 | 35.37 |
| ATOM | 5799 | N   | ASP | 735 | 44.566 | 0.646  | 30.327 | 1.00 | 33.75 |
| ATOM | 5801 | CA  | ASP | 735 | 45.438 | 1.076  | 31.433 | 1.00 | 36.72 |
| ATOM | 5802 | CB  | ASP | 735 | 46.379 | -0.055 | 31.857 | 1.00 | 42.71 |
| ATOM | 5803 | CG  | ASP | 735 | 45.722 | -1.052 | 32.774 | 1.00 | 47.31 |
| ATOM | 5804 | OD1 | ASP | 735 | 46.124 | -2.241 | 32.720 | 1.00 | 50.99 |
| ATOM | 5805 | OD2 | ASP | 735 | 44.824 | -0.646 | 33.552 | 1.00 | 48.45 |
| ATOM | 5806 | C   | ASP | 735 | 46.291 | 2.251  | 30.972 | 1.00 | 34.25 |
| ATOM | 5807 | O   | ASP | 735 | 46.376 | 3.286  | 31.648 | 1.00 | 34.31 |
| ATOM | 5808 | N   | CYS | 736 | 46.927 | 2.064  | 29.816 | 1.00 | 31.85 |
| ATOM | 5810 | CA  | CYS | 736 | 47.780 | 3.077  | 29.204 | 1.00 | 29.93 |
| ATOM | 5811 | CB  | CYS | 736 | 48.413 | 2.545  | 27.921 | 1.00 | 24.97 |
| ATOM | 5812 | SG  | CYS | 736 | 49.504 | 1.159  | 28.180 | 1.00 | 31.35 |
| ATOM | 5813 | C   | CYS | 736 | 46.994 | 4.325  | 28.885 | 1.00 | 31.62 |
| ATOM | 5814 | O   | CYS | 736 | 47.562 | 5.416  | 28.823 | 1.00 | 30.73 |
| ATOM | 5815 | N   | TRP | 737 | 45.680 | 4.174  | 28.711 | 1.00 | 35.03 |
| ATOM | 5817 | CA  | TRP | 737 | 44.812 | 5.308  | 28.395 | 1.00 | 36.35 |
| ATOM | 5818 | CB  | TRP | 737 | 43.808 | 4.927  | 27.297 | 1.00 | 36.43 |
| ATOM | 5819 | CG  | TRP | 737 | 44.451 | 4.487  | 26.010 | 1.00 | 34.34 |
| ATOM | 5820 | CD2 | TRP | 737 | 43.914 | 3.565  | 25.052 | 1.00 | 34.81 |
| ATOM | 5821 | CE2 | TRP | 737 | 44.852 | 3.461  | 23.999 | 1.00 | 33.92 |
| ATOM | 5822 | CE3 | TRP | 737 | 42.730 | 2.816  | 24.980 | 1.00 | 33.06 |
| ATOM | 5823 | CD1 | TRP | 737 | 45.659 | 4.890  | 25.514 | 1.00 | 35.19 |
| ATOM | 5824 | NE1 | TRP | 737 | 45.907 | 4.279  | 24.309 | 1.00 | 35.00 |
| ATOM | 5826 | CZ2 | TRP | 737 | 44.644 | 2.633  | 22.886 | 1.00 | 33.45 |
| ATOM | 5827 | CZ3 | TRP | 737 | 42.527 | 1.991  | 23.876 | 1.00 | 32.92 |
| ATOM | 5828 | CH2 | TRP | 737 | 43.480 | 1.909  | 22.844 | 1.00 | 30.45 |
| ATOM | 5829 | C   | TRP | 737 | 44.080 | 5.895  | 29.609 | 1.00 | 37.23 |
| ATOM | 5830 | O   | TRP | 737 | 43.047 | 6.551  | 29.474 | 1.00 | 37.44 |
| ATOM | 5831 | N   | HIS | 738 | 44.624 | 5.681  | 30.798 | 1.00 | 41.45 |
| ATOM | 5833 | CA  | HIS | 738 | 44.006 | 6.208  | 32.008 | 1.00 | 41.52 |
| ATOM | 5834 | CB  | HIS | 738 | 44.675 | 5.635  | 33.258 | 1.00 | 41.23 |
| ATOM | 5835 | CG  | HIS | 738 | 43.925 | 5.924  | 34.522 | 1.00 | 43.31 |
| ATOM | 5836 | CD2 | HIS | 738 | 43.618 | 7.096  | 35.126 | 1.00 | 41.58 |
| ATOM | 5837 | ND1 | HIS | 738 | 43.338 | 4.935  | 35.279 | 1.00 | 44.22 |
| ATOM | 5839 | CE1 | HIS | 738 | 42.693 | 5.487  | 36.294 | 1.00 | 46.62 |
| ATOM | 5840 | NE2 | HIS | 738 | 42.848 | 6.798  | 36.223 | 1.00 | 43.99 |
| ATOM | 5842 | C   | HIS | 738 | 44.118 | 7.726  | 32.015 | 1.00 | 41.75 |
| ATOM | 5843 | O   | HIS | 738 | 45.179 | 8.268  | 31.731 | 1.00 | 40.84 |
| ATOM | 5844 | N   | ALA | 739 | 43.025 | 8.405  | 32.352 | 1.00 | 42.47 |
| ATOM | 5846 | CA  | ALA | 739 | 43.004 | 9.873  | 32.398 | 1.00 | 44.58 |
| ATOM | 5847 | CB  | ALA | 739 | 41.629 | 10.361 | 32.825 | 1.00 | 48.19 |
| ATOM | 5848 | C   | ALA | 739 | 44.081 | 10.467 | 33.317 | 1.00 | 45.12 |
| ATOM | 5849 | O   | ALA | 739 | 44.653 | 11.510 | 33.020 | 1.00 | 45.66 |
| ATOM | 5850 | N   | VAL | 740 | 44.262 | 9.852  | 34.481 | 1.00 | 46.64 |
| ATOM | 5852 | CA  | VAL | 740 | 45.278 | 10.273 | 35.453 | 1.00 | 46.78 |
| ATOM | 5853 | CB  | VAL | 740 | 44.867 | 9.893  | 36.888 | 1.00 | 47.74 |
| ATOM | 5854 | CG1 | VAL | 740 | 45.919 | 10.372 | 37.890 | 1.00 | 49.35 |
| ATOM | 5855 | CG2 | VAL | 740 | 43.515 | 10.495 | 37.211 | 1.00 | 47.89 |
| ATOM | 5856 | C   | VAL | 740 | 46.601 | 9.573  | 35.121 | 1.00 | 45.24 |
| ATOM | 5857 | O   | VAL | 740 | 46.754 | 8.362  | 35.347 | 1.00 | 45.01 |
| ATOM | 5858 | N   | PRO | 741 | 47.588 | 10.335 | 34.637 | 1.00 | 43.46 |
| ATOM | 5859 | CD  | PRO | 741 | 47.536 | 11.794 | 34.437 | 1.00 | 43.51 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5860 | CA  | PRO | 741 | 48.905 | 9.804  | 34.266 | 1.00 | 46.22 |
| ATOM | 5861 | CB  | PRO | 741 | 49.701 | 11.070 | 33.942 | 1.00 | 45.32 |
| ATOM | 5862 | CG  | PRO | 741 | 48.632 | 12.010 | 33.426 | 1.00 | 42.81 |
| ATOM | 5863 | C   | PRO | 741 | 49.588 | 8.936  | 35.328 | 1.00 | 47.45 |
| ATOM | 5864 | O   | PRO | 741 | 50.245 | 7.950  | 34.994 | 1.00 | 45.12 |
| ATOM | 5865 | N   | SER | 742 | 49.394 | 9.280  | 36.601 | 1.00 | 48.78 |
| ATOM | 5867 | CA  | SER | 742 | 49.994 | 8.532  | 37.703 | 1.00 | 48.76 |
| ATOM | 5868 | CB  | SER | 742 | 49.845 | 9.317  | 39.012 | 1.00 | 51.11 |
| ATOM | 5869 | OG  | SER | 742 | 48.482 | 9.488  | 39.373 | 1.00 | 53.50 |
| ATOM | 5871 | C   | SER | 742 | 49.376 | 7.150  | 37.867 | 1.00 | 47.77 |
| ATOM | 5872 | O   | SER | 742 | 49.932 | 6.283  | 38.539 | 1.00 | 47.31 |
| ATOM | 5873 | N   | GLN | 743 | 48.199 | 6.962  | 37.284 | 1.00 | 47.57 |
| ATOM | 5875 | CA  | GLN | 743 | 47.511 | 5.689  | 37.384 | 1.00 | 47.14 |
| ATOM | 5876 | CB  | GLN | 743 | 46.004 | 5.918  | 37.531 | 1.00 | 50.16 |
| ATOM | 5877 | CG  | GLN | 743 | 45.438 | 5.447  | 38.871 | 1.00 | 54.69 |
| ATOM | 5878 | CD  | GLN | 743 | 46.239 | 5.964  | 40.051 | 1.00 | 57.62 |
| ATOM | 5879 | OE1 | GLN | 743 | 46.898 | 5.196  | 40.749 | 1.00 | 59.09 |
| ATOM | 5880 | NE2 | GLN | 743 | 46.202 | 7.277  | 40.268 | 1.00 | 59.45 |
| ATOM | 5883 | C   | GLN | 743 | 47.816 | 4.774  | 36.212 | 1.00 | 44.41 |
| ATOM | 5884 | O   | GLN | 743 | 47.365 | 3.627  | 36.182 | 1.00 | 44.39 |
| ATOM | 5885 | N   | ARG | 744 | 48.515 | 5.305  | 35.212 | 1.00 | 42.87 |
| ATOM | 5887 | CA  | ARG | 744 | 48.902 | 4.506  | 34.046 | 1.00 | 41.45 |
| ATOM | 5888 | CB  | ARG | 744 | 49.350 | 5.397  | 32.883 | 1.00 | 37.34 |
| ATOM | 5889 | CG  | ARG | 744 | 48.316 | 6.380  | 32.412 | 1.00 | 32.30 |
| ATOM | 5890 | CD  | ARG | 744 | 48.854 | 7.207  | 31.270 | 1.00 | 31.37 |
| ATOM | 5891 | NE  | ARG | 744 | 47.921 | 8.276  | 30.946 | 1.00 | 36.76 |
| ATOM | 5893 | CZ  | ARG | 744 | 48.271 | 9.492  | 30.543 | 1.00 | 39.88 |
| ATOM | 5894 | NH1 | ARG | 744 | 49.553 | 9.813  | 30.399 | 1.00 | 39.94 |
| ATOM | 5897 | NH2 | ARG | 744 | 47.330 | 10.404 | 30.322 | 1.00 | 39.12 |
| ATOM | 5900 | C   | ARG | 744 | 50.068 | 3.616  | 34.471 | 1.00 | 41.40 |
| ATOM | 5901 | O   | ARG | 744 | 50.813 | 3.945  | 35.405 | 1.00 | 42.84 |
| ATOM | 5902 | N   | PRO | 745 | 50.203 | 2.441  | 33.849 | 1.00 | 40.11 |
| ATOM | 5903 | CD  | PRO | 745 | 49.345 | 1.739  | 32.876 | 1.00 | 39.91 |
| ATOM | 5904 | CA  | PRO | 745 | 51.332 | 1.607  | 34.266 | 1.00 | 38.58 |
| ATOM | 5905 | CB  | PRO | 745 | 51.019 | 0.261  | 33.605 | 1.00 | 37.46 |
| ATOM | 5906 | CG  | PRO | 745 | 50.250 | 0.645  | 32.377 | 1.00 | 37.41 |
| ATOM | 5907 | C   | PRO | 745 | 52.640 | 2.202  | 33.750 | 1.00 | 37.73 |
| ATOM | 5908 | O   | PRO | 745 | 52.634 | 3.027  | 32.835 | 1.00 | 37.71 |
| ATOM | 5909 | N   | THR | 746 | 53.753 | 1.843  | 34.373 | 1.00 | 35.90 |
| ATOM | 5911 | CA  | THR | 746 | 55.050 | 2.328  | 33.913 | 1.00 | 34.77 |
| ATOM | 5912 | CB  | THR | 746 | 56.085 | 2.380  | 35.075 | 1.00 | 33.85 |
| ATOM | 5913 | OG1 | THR | 746 | 56.296 | 1.059  | 35.602 | 1.00 | 33.92 |
| ATOM | 5915 | CG2 | THR | 746 | 55.605 | 3.302  | 36.177 | 1.00 | 32.17 |
| ATOM | 5916 | C   | THR | 746 | 55.544 | 1.327  | 32.870 | 1.00 | 32.69 |
| ATOM | 5917 | O   | THR | 746 | 55.026 | 0.213  | 32.795 | 1.00 | 31.56 |
| ATOM | 5918 | N   | PHE | 747 | 56.538 | 1.708  | 32.066 | 1.00 | 34.04 |
| ATOM | 5920 | CA  | PHE | 747 | 57.093 | 0.782  | 31.083 | 1.00 | 31.74 |
| ATOM | 5921 | CB  | PHE | 747 | 58.121 | 1.472  | 30.193 | 1.00 | 30.55 |
| ATOM | 5922 | CG  | PHE | 747 | 57.504 | 2.287  | 29.096 | 1.00 | 29.40 |
| ATOM | 5923 | CD1 | PHE | 747 | 56.772 | 1.666  | 28.092 | 1.00 | 28.24 |
| ATOM | 5924 | CD2 | PHE | 747 | 57.609 | 3.667  | 29.091 | 1.00 | 27.50 |
| ATOM | 5925 | CE1 | PHE | 747 | 56.170 | 2.407  | 27.100 | 1.00 | 24.35 |
| ATOM | 5926 | CE2 | PHE | 747 | 57.001 | 4.413  | 28.091 | 1.00 | 29.27 |
| ATOM | 5927 | CZ  | PHE | 747 | 56.276 | 3.776  | 27.103 | 1.00 | 25.73 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5928 | C   | PHE | 747 | 57.714 | -0.413 | 31.782 | 1.00 | 31.92 |
| ATOM | 5929 | O   | PHE | 747 | 57.727 | -1.514 | 31.243 | 1.00 | 32.46 |
| ATOM | 5930 | N   | LYS | 748 | 58.233 | -0.199 | 32.986 | 1.00 | 33.47 |
| ATOM | 5932 | CA  | LYS | 748 | 58.816 | -1.302 | 33.733 | 1.00 | 35.57 |
| ATOM | 5933 | CB  | LYS | 748 | 59.468 | -0.800 | 35.026 | 1.00 | 39.42 |
| ATOM | 5934 | CG  | LYS | 748 | 60.083 | -1.923 | 35.861 | 1.00 | 46.49 |
| ATOM | 5935 | CD  | LYS | 748 | 60.817 | -1.407 | 37.103 | 1.00 | 50.69 |
| ATOM | 5936 | CE  | LYS | 748 | 61.253 | -2.574 | 37.999 | 1.00 | 52.57 |
| ATOM | 5937 | NZ  | LYS | 748 | 62.072 | -2.129 | 39.155 | 1.00 | 56.45 |
| ATOM | 5941 | C   | LYS | 748 | 57.700 | -2.318 | 34.028 | 1.00 | 35.58 |
| ATOM | 5942 | O   | LYS | 748 | 57.898 | -3.526 | 33.871 | 1.00 | 34.72 |
| ATOM | 5943 | N   | GLN | 749 | 56.522 | -1.818 | 34.411 | 1.00 | 35.59 |
| ATOM | 5945 | CA  | GLN | 749 | 55.369 | -2.684 | 34.692 | 1.00 | 38.20 |
| ATOM | 5946 | CB  | GLN | 749 | 54.154 | -1.872 | 35.162 | 1.00 | 42.73 |
| ATOM | 5947 | CG  | GLN | 749 | 54.264 | -1.171 | 36.499 | 1.00 | 49.30 |
| ATOM | 5948 | CD  | GLN | 749 | 53.060 | -0.282 | 36.761 | 1.00 | 53.13 |
| ATOM | 5949 | OE1 | GLN | 749 | 53.194 | 0.915  | 37.023 | 1.00 | 52.71 |
| ATOM | 5950 | NE2 | GLN | 749 | 51.873 | -0.856 | 36.644 | 1.00 | 58.54 |
| ATOM | 5953 | C   | GLN | 749 | 54.954 | -3.392 | 33.409 | 1.00 | 36.16 |
| ATOM | 5954 | O   | GLN | 749 | 54.745 | -4.605 | 33.393 | 1.00 | 36.67 |
| ATOM | 5955 | N   | LEU | 750 | 54.801 | -2.609 | 32.342 | 1.00 | 35.83 |
| ATOM | 5957 | CA  | LEU | 750 | 54.381 | -3.117 | 31.037 | 1.00 | 34.49 |
| ATOM | 5958 | CB  | LEU | 750 | 54.324 | -1.988 | 30.004 | 1.00 | 32.49 |
| ATOM | 5959 | CG  | LEU | 750 | 53.206 | -0.958 | 30.188 | 1.00 | 31.94 |
| ATOM | 5960 | CD1 | LEU | 750 | 53.411 | 0.230  | 29.267 | 1.00 | 30.45 |
| ATOM | 5961 | CD2 | LEU | 750 | 51.859 | -1.610 | 29.933 | 1.00 | 29.30 |
| ATOM | 5962 | C   | LEU | 750 | 55.294 | -4.214 | 30.559 | 1.00 | 33.87 |
| ATOM | 5963 | O   | LEU | 750 | 54.828 | -5.208 | 30.027 | 1.00 | 34.72 |
| ATOM | 5964 | N   | VAL | 751 | 56.598 | -4.038 | 30.759 | 1.00 | 36.12 |
| ATOM | 5966 | CA  | VAL | 751 | 57.585 | -5.045 | 30.363 | 1.00 | 34.50 |
| ATOM | 5967 | CB  | VAL | 751 | 59.054 | -4.532 | 30.559 | 1.00 | 31.96 |
| ATOM | 5968 | CG1 | VAL | 751 | 60.052 | -5.646 | 30.308 | 1.00 | 30.24 |
| ATOM | 5969 | CG2 | VAL | 751 | 59.342 | -3.386 | 29.604 | 1.00 | 28.02 |
| ATOM | 5970 | C   | VAL | 751 | 57.349 | -6.321 | 31.182 | 1.00 | 36.11 |
| ATOM | 5971 | O   | VAL | 751 | 57.333 | -7.422 | 30.638 | 1.00 | 36.45 |
| ATOM | 5972 | N   | GLU | 752 | 57.107 | -6.165 | 32.479 | 1.00 | 37.83 |
| ATOM | 5974 | CA  | GLU | 752 | 56.869 | -7.326 | 33.331 | 1.00 | 41.47 |
| ATOM | 5975 | CB  | GLU | 752 | 56.800 | -6.910 | 34.804 | 1.00 | 43.03 |
| ATOM | 5976 | CG  | GLU | 752 | 58.122 | -6.305 | 35.263 | 1.00 | 52.52 |
| ATOM | 5977 | CD  | GLU | 752 | 58.251 | -6.176 | 36.761 | 1.00 | 57.18 |
| ATOM | 5978 | OE1 | GLU | 752 | 58.600 | -5.068 | 37.233 | 1.00 | 58.11 |
| ATOM | 5979 | OE2 | GLU | 752 | 58.032 | -7.191 | 37.461 | 1.00 | 61.59 |
| ATOM | 5980 | C   | GLU | 752 | 55.623 | -8.097 | 32.890 | 1.00 | 40.16 |
| ATOM | 5981 | O   | GLU | 752 | 55.689 | -9.308 | 32.642 | 1.00 | 39.75 |
| ATOM | 5982 | N   | ASP | 753 | 54.524 | -7.376 | 32.696 | 1.00 | 40.06 |
| ATOM | 5984 | CA  | ASP | 753 | 53.275 | -7.982 | 32.264 | 1.00 | 39.73 |
| ATOM | 5985 | CB  | ASP | 753 | 52.157 | -6.947 | 32.247 | 1.00 | 41.00 |
| ATOM | 5986 | CG  | ASP | 753 | 51.668 | -6.591 | 33.640 | 1.00 | 45.17 |
| ATOM | 5987 | OD1 | ASP | 753 | 51.753 | -7.468 | 34.543 | 1.00 | 49.78 |
| ATOM | 5988 | OD2 | ASP | 753 | 51.210 | -5.439 | 33.829 | 1.00 | 45.51 |
| ATOM | 5989 | C   | ASP | 753 | 53.396 | -8.595 | 30.890 | 1.00 | 39.64 |
| ATOM | 5990 | O   | ASP | 753 | 52.955 | -9.720 | 30.674 | 1.00 | 41.84 |
| ATOM | 5991 | N   | LEU | 754 | 53.998 | -7.861 | 29.960 | 1.00 | 37.75 |
| ATOM | 5993 | CA  | LEU | 754 | 54.161 | -8.358 | 28.603 | 1.00 | 38.16 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 5994 | CB  | LEU | 754 | 54.664 | -7.261  | 27.664 | 1.00 | 36.95 |
| ATOM | 5995 | CG  | LEU | 754 | 53.552 | -6.270  | 27.307 | 1.00 | 36.64 |
| ATOM | 5996 | CD1 | LEU | 754 | 54.141 | -5.062  | 26.590 | 1.00 | 34.02 |
| ATOM | 5997 | CD2 | LEU | 754 | 52.459 | -6.968  | 26.465 | 1.00 | 34.13 |
| ATOM | 5998 | C   | LEU | 754 | 55.070 | -9.561  | 28.571 | 1.00 | 38.46 |
| ATOM | 5999 | O   | LEU | 754 | 54.905 | -10.451 | 27.740 | 1.00 | 39.95 |
| ATOM | 6000 | N   | ASP | 755 | 56.014 | -9.602  | 29.502 | 1.00 | 39.19 |
| ATOM | 6002 | CA  | ASP | 755 | 56.930 | -10.728 | 29.594 | 1.00 | 40.87 |
| ATOM | 6003 | CB  | ASP | 755 | 57.956 | -10.462 | 30.696 | 1.00 | 45.11 |
| ATOM | 6004 | CG  | ASP | 755 | 59.128 | -11.415 | 30.652 | 1.00 | 48.64 |
| ATOM | 6005 | OD1 | ASP | 755 | 59.759 | -11.612 | 31.711 | 1.00 | 54.27 |
| ATOM | 6006 | OD2 | ASP | 755 | 59.432 | -11.954 | 29.565 | 1.00 | 51.46 |
| ATOM | 6007 | C   | ASP | 755 | 56.082 | -11.952 | 29.947 | 1.00 | 40.67 |
| ATOM | 6008 | O   | ASP | 755 | 56.152 | -12.996 | 29.289 | 1.00 | 38.49 |
| ATOM | 6009 | N   | ARG | 756 | 55.232 | -11.771 | 30.955 | 1.00 | 40.06 |
| ATOM | 6011 | CA  | ARG | 756 | 54.340 | -12.817 | 31.437 | 1.00 | 40.07 |
| ATOM | 6012 | CB  | ARG | 756 | 53.573 | -12.316 | 32.661 | 1.00 | 40.24 |
| ATOM | 6013 | CG  | ARG | 756 | 52.435 | -13.217 | 33.138 | 1.00 | 42.12 |
| ATOM | 6014 | CD  | ARG | 756 | 51.791 | -12.631 | 34.389 | 1.00 | 42.33 |
| ATOM | 6015 | NE  | ARG | 756 | 51.353 | -11.247 | 34.186 | 1.00 | 46.68 |
| ATOM | 6017 | CZ  | ARG | 756 | 50.295 | -10.891 | 33.460 | 1.00 | 48.17 |
| ATOM | 6018 | NH1 | ARG | 756 | 49.549 | -11.818 | 32.866 | 1.00 | 46.64 |
| ATOM | 6021 | NH2 | ARG | 756 | 49.998 | -9.605  | 33.305 | 1.00 | 48.92 |
| ATOM | 6024 | C   | ARG | 756 | 53.362 | -13.275 | 30.364 | 1.00 | 40.19 |
| ATOM | 6025 | O   | ARG | 756 | 53.247 | -14.469 | 30.110 | 1.00 | 42.24 |
| ATOM | 6026 | N   | ILE | 757 | 52.688 | -12.327 | 29.717 | 1.00 | 38.18 |
| ATOM | 6028 | CA  | ILE | 757 | 51.706 | -12.649 | 28.683 | 1.00 | 38.40 |
| ATOM | 6029 | CB  | ILE | 757 | 50.952 | -11.382 | 28.187 | 1.00 | 36.55 |
| ATOM | 6030 | CG2 | ILE | 757 | 49.952 | -11.758 | 27.105 | 1.00 | 34.67 |
| ATOM | 6031 | CG1 | ILE | 757 | 50.216 | -10.726 | 29.364 | 1.00 | 34.65 |
| ATOM | 6032 | CD1 | ILE | 757 | 49.554 | -9.423  | 29.048 | 1.00 | 36.49 |
| ATOM | 6033 | C   | ILE | 757 | 52.301 | -13.400 | 27.500 | 1.00 | 39.19 |
| ATOM | 6034 | O   | ILE | 757 | 51.709 | -14.360 | 27.025 | 1.00 | 39.66 |
| ATOM | 6035 | N   | VAL | 758 | 53.492 | -12.996 | 27.061 | 1.00 | 42.36 |
| ATOM | 6037 | CA  | VAL | 758 | 54.161 | -13.645 | 25.937 | 1.00 | 43.15 |
| ATOM | 6038 | CB  | VAL | 758 | 55.582 | -13.052 | 25.682 | 1.00 | 41.72 |
| ATOM | 6039 | CG1 | VAL | 758 | 56.308 | -13.855 | 24.621 | 1.00 | 41.57 |
| ATOM | 6040 | CG2 | VAL | 758 | 55.491 | -11.619 | 25.229 | 1.00 | 40.06 |
| ATOM | 6041 | C   | VAL | 758 | 54.299 | -15.133 | 26.231 | 1.00 | 47.11 |
| ATOM | 6042 | O   | VAL | 758 | 54.045 | -15.971 | 25.369 | 1.00 | 48.62 |
| ATOM | 6043 | N   | ALA | 759 | 54.695 | -15.446 | 27.464 | 1.00 | 49.64 |
| ATOM | 6045 | CA  | ALA | 759 | 54.879 | -16.820 | 27.908 | 1.00 | 51.35 |
| ATOM | 6046 | CB  | ALA | 759 | 55.423 | -16.830 | 29.317 | 1.00 | 50.11 |
| ATOM | 6047 | C   | ALA | 759 | 53.568 | -17.598 | 27.850 | 1.00 | 54.72 |
| ATOM | 6048 | O   | ALA | 759 | 53.520 | -18.717 | 27.348 | 1.00 | 58.64 |
| ATOM | 6049 | N   | LEU | 760 | 52.496 | -16.983 | 28.329 | 1.00 | 54.84 |
| ATOM | 6051 | CA  | LEU | 760 | 51.194 | -17.628 | 28.343 | 1.00 | 55.87 |
| ATOM | 6052 | CB  | LEU | 760 | 50.330 | -17.034 | 29.459 | 1.00 | 56.85 |
| ATOM | 6053 | CG  | LEU | 760 | 50.875 | -17.165 | 30.885 | 1.00 | 56.80 |
| ATOM | 6054 | CD1 | LEU | 760 | 49.991 | -16.392 | 31.849 | 1.00 | 56.78 |
| ATOM | 6055 | CD2 | LEU | 760 | 50.959 | -18.631 | 31.289 | 1.00 | 57.78 |
| ATOM | 6056 | C   | LEU | 760 | 50.454 | -17.546 | 27.013 | 1.00 | 57.36 |
| ATOM | 6057 | O   | LEU | 760 | 49.262 | -17.859 | 26.944 | 1.00 | 57.65 |
| ATOM | 6058 | N   | THR | 761 | 51.151 | -17.134 | 25.956 | 1.00 | 58.71 |

|      |      |     |      |      |         |         |        |      |       |      |
|------|------|-----|------|------|---------|---------|--------|------|-------|------|
| ATOM | 6060 | CA  | THR  | 761  | 50.541  | -17.025 | 24.630 | 1.00 | 59.04 |      |
| ATOM | 6061 | CB  | THR  | 761  | 50.839  | -15.657 | 23.971 | 1.00 | 56.72 |      |
| ATOM | 6062 | OG1 | THR  | 761  | 50.287  | -14.610 | 24.775 | 1.00 | 56.53 |      |
| ATOM | 6064 | CG2 | THR  | 761  | 50.213  | -15.584 | 22.590 | 1.00 | 53.81 |      |
| ATOM | 6065 | C   | THR  | 761  | 51.049  | -18.138 | 23.721 | 1.00 | 60.44 |      |
| ATOM | 6066 | O   | THR  | 761  | 52.255  | -18.295 | 23.530 | 1.00 | 61.40 |      |
| ATOM | 6067 | SG  | CYS  | 1603 | 18.474  | -8.976  | 20.202 | 0.50 | 37.82 | PRT2 |
| ATOM | 6068 | CG  | MET  | 534  | 69.311  | 12.109  | 23.281 | 0.50 | 36.25 | PRT2 |
| ATOM | 6069 | SD  | MET  | 534  | 69.286  | 12.958  | 24.867 | 0.50 | 42.66 | PRT2 |
| ATOM | 6070 | CE  | MET  | 534  | 70.539  | 12.083  | 25.804 | 0.50 | 43.27 | PRT2 |
| ATOM | 6071 | SG  | CYS  | 603  | 56.046  | -7.949  | 16.446 | 0.50 | 36.47 | PRT2 |
| ATOM | 2676 | OH2 | TIP3 | 1    | 71.794  | 25.061  | 2.660  | 1.00 | 24.53 |      |
| ATOM | 2679 | OH2 | TIP3 | 2    | 39.750  | 3.992   | 15.898 | 1.00 | 39.62 |      |
| ATOM | 2682 | OH2 | TIP3 | 3    | 83.809  | 19.717  | 10.596 | 1.00 | 28.26 |      |
| ATOM | 2685 | OH2 | TIP3 | 4    | 83.630  | 20.056  | 7.685  | 1.00 | 26.19 |      |
| ATOM | 2688 | OH2 | TIP3 | 5    | 75.073  | 16.616  | 6.785  | 1.00 | 26.48 |      |
| ATOM | 2691 | OH2 | TIP3 | 6    | 86.549  | 19.594  | 9.502  | 1.00 | 33.65 |      |
| ATOM | 2694 | OH2 | TIP3 | 7    | 51.913  | 11.060  | 24.263 | 1.00 | 35.55 |      |
| ATOM | 2697 | OH2 | TIP3 | 8    | 55.093  | 9.421   | 22.524 | 1.00 | 26.63 |      |
| ATOM | 2700 | OH2 | TIP3 | 9    | 57.161  | 4.614   | 32.443 | 1.00 | 29.69 |      |
| ATOM | 2703 | OH2 | TIP3 | 10   | 52.169  | 4.735   | 13.281 | 1.00 | 22.61 |      |
| ATOM | 2706 | OH2 | TIP3 | 11   | 41.110  | 5.543   | 22.764 | 1.00 | 41.60 |      |
| ATOM | 2709 | OH2 | TIP3 | 12   | 45.145  | 8.857   | 21.555 | 1.00 | 36.99 |      |
| ATOM | 2712 | OH2 | TIP3 | 13   | 64.465  | -2.607  | 28.883 | 1.00 | 30.17 |      |
| ATOM | 2715 | OH2 | TIP3 | 14   | 76.944  | 13.287  | 23.954 | 1.00 | 32.94 |      |
| ATOM | 2718 | OH2 | TIP3 | 15   | 79.062  | 17.048  | 18.200 | 1.00 | 51.65 |      |
| ATOM | 2721 | OH2 | TIP3 | 16   | 83.066  | 11.657  | 15.958 | 1.00 | 25.12 |      |
| ATOM | 2724 | OH2 | TIP3 | 17   | 13.957  | -9.951  | 0.095  | 1.00 | 26.02 |      |
| ATOM | 2727 | OH2 | TIP3 | 18   | 38.359  | -0.001  | 5.000  | 1.00 | 37.43 |      |
| ATOM | 2730 | OH2 | TIP3 | 19   | 5.442   | 2.705   | 19.077 | 1.00 | 29.46 |      |
| ATOM | 2733 | OH2 | TIP3 | 20   | 27.008  | 6.166   | 4.885  | 1.00 | 25.05 |      |
| ATOM | 2736 | OH2 | TIP3 | 21   | 34.242  | -1.725  | 16.911 | 1.00 | 52.12 |      |
| ATOM | 2739 | OH2 | TIP3 | 22   | 20.167  | 2.428   | 27.681 | 1.00 | 42.69 |      |
| ATOM | 2742 | OH2 | TIP3 | 23   | 50.794  | -11.834 | 38.045 | 1.00 | 60.16 |      |
| ATOM | 2745 | OH2 | TIP3 | 24   | 17.261  | -5.993  | -1.757 | 1.00 | 25.88 |      |
| ATOM | 2748 | OH2 | TIP3 | 25   | 27.516  | 7.803   | 15.070 | 1.00 | 39.33 |      |
| ATOM | 2751 | OH2 | TIP3 | 26   | 31.574  | 0.146   | 6.684  | 1.00 | 35.78 |      |
| ATOM | 2754 | OH2 | TIP3 | 27   | 27.119  | -12.972 | 27.844 | 1.00 | 43.66 |      |
| ATOM | 2757 | OH2 | TIP3 | 28   | 28.439  | -17.074 | 13.203 | 1.00 | 36.44 |      |
| ATOM | 2760 | OH2 | TIP3 | 29   | 88.706  | 14.393  | 7.969  | 1.00 | 32.49 |      |
| ATOM | 2763 | OH2 | TIP3 | 30   | -2.338  | -3.424  | 11.295 | 1.00 | 49.20 |      |
| ATOM | 2766 | OH2 | TIP3 | 31   | 35.086  | -4.130  | 18.836 | 1.00 | 37.83 |      |
| ATOM | 2769 | OH2 | TIP3 | 32   | 80.455  | 17.922  | 9.507  | 1.00 | 23.69 |      |
| ATOM | 2772 | OH2 | TIP3 | 33   | 5.538   | 3.619   | 10.835 | 1.00 | 29.13 |      |
| ATOM | 2775 | OH2 | TIP3 | 34   | -10.685 | 5.290   | 11.288 | 1.00 | 24.40 |      |
| ATOM | 2778 | OH2 | TIP3 | 35   | 29.210  | -8.799  | 20.241 | 1.00 | 46.52 |      |
| ATOM | 2781 | OH2 | TIP3 | 36   | 6.195   | 3.150   | 13.803 | 1.00 | 31.39 |      |
| ATOM | 2784 | OH2 | TIP3 | 37   | 31.898  | 2.830   | 0.154  | 1.00 | 40.17 |      |
| ATOM | 2787 | OH2 | TIP3 | 38   | 19.915  | 2.023   | -3.939 | 1.00 | 31.34 |      |
| ATOM | 2790 | OH2 | TIP3 | 39   | 62.242  | 2.604   | 32.859 | 1.00 | 39.67 |      |
| ATOM | 2793 | OH2 | TIP3 | 40   | 21.231  | -7.063  | -3.900 | 1.00 | 23.55 |      |
| ATOM | 2796 | OH2 | TIP3 | 41   | -15.809 | 8.838   | 22.610 | 1.00 | 36.02 |      |
| ATOM | 2799 | OH2 | TIP3 | 42   | 40.120  | 2.154   | 8.433  | 1.00 | 60.62 |      |
| ATOM | 2802 | OH2 | TIP3 | 43   | 19.583  | 11.128  | -0.045 | 1.00 | 37.85 |      |

|      |      |     |      |    |         |         |        |      |       |
|------|------|-----|------|----|---------|---------|--------|------|-------|
| ATOM | 2805 | OH2 | TIP3 | 44 | 67.056  | 9.030   | 17.389 | 1.00 | 29.79 |
| ATOM | 2808 | OH2 | TIP3 | 45 | 87.772  | 18.919  | 18.595 | 1.00 | 48.44 |
| ATOM | 2811 | OH2 | TIP3 | 46 | 74.584  | 17.123  | 4.200  | 1.00 | 39.18 |
| ATOM | 2814 | OH2 | TIP3 | 47 | 29.365  | 16.707  | 10.560 | 1.00 | 34.11 |
| ATOM | 2817 | OH2 | TIP3 | 48 | 66.486  | 6.826   | 15.051 | 1.00 | 32.28 |
| ATOM | 2820 | OH2 | TIP3 | 49 | 85.008  | 21.441  | 5.731  | 1.00 | 23.97 |
| ATOM | 2823 | OH2 | TIP3 | 50 | -4.572  | 2.912   | 3.173  | 1.00 | 28.05 |
| ATOM | 2826 | OH2 | TIP3 | 51 | 19.496  | 5.141   | 4.881  | 1.00 | 28.88 |
| ATOM | 2829 | OH2 | TIP3 | 52 | 67.492  | 3.490   | 10.902 | 1.00 | 33.57 |
| ATOM | 2832 | OH2 | TIP3 | 53 | 34.791  | 5.413   | 24.797 | 1.00 | 40.16 |
| ATOM | 2835 | OH2 | TIP3 | 54 | 34.787  | -16.910 | 13.756 | 1.00 | 39.46 |
| ATOM | 2838 | OH2 | TIP3 | 55 | 59.972  | 7.450   | 27.870 | 1.00 | 31.56 |
| ATOM | 2841 | OH2 | TIP3 | 56 | -7.139  | -1.696  | 6.345  | 1.00 | 42.00 |
| ATOM | 2844 | OH2 | TIP3 | 57 | 54.998  | 11.953  | 25.360 | 1.00 | 42.05 |
| ATOM | 2847 | OH2 | TIP3 | 58 | 68.697  | 6.686   | 16.740 | 1.00 | 46.12 |
| ATOM | 2850 | OH2 | TIP3 | 59 | 73.750  | 20.885  | 19.041 | 1.00 | 32.26 |
| ATOM | 2853 | OH2 | TIP3 | 60 | 3.431   | -8.270  | -8.218 | 1.00 | 31.22 |
| ATOM | 2856 | OH2 | TIP3 | 61 | 37.904  | 10.790  | 5.612  | 1.00 | 33.72 |
| ATOM | 2859 | OH2 | TIP3 | 62 | 29.982  | -9.545  | -1.303 | 1.00 | 39.11 |
| ATOM | 2862 | OH2 | TIP3 | 63 | 66.918  | 1.757   | 8.678  | 1.00 | 34.68 |
| ATOM | 2865 | OH2 | TIP3 | 64 | 49.117  | 1.310   | 12.227 | 1.00 | 34.31 |
| ATOM | 2868 | OH2 | TIP3 | 65 | 41.246  | 3.987   | 29.033 | 1.00 | 34.55 |
| ATOM | 2871 | OH2 | TIP3 | 66 | 10.755  | -12.957 | 1.167  | 1.00 | 42.14 |
| ATOM | 2874 | OH2 | TIP3 | 67 | -1.184  | -4.327  | 21.439 | 1.00 | 37.90 |
| ATOM | 2877 | OH2 | TIP3 | 68 | 30.349  | 16.267  | 13.265 | 1.00 | 55.23 |
| ATOM | 2880 | OH2 | TIP3 | 69 | 8.111   | 4.362   | 3.445  | 1.00 | 23.88 |
| ATOM | 2883 | OH2 | TIP3 | 70 | 73.131  | 18.780  | 22.628 | 1.00 | 40.20 |
| ATOM | 2886 | OH2 | TIP3 | 71 | -7.949  | -3.409  | 24.953 | 1.00 | 35.49 |
| ATOM | 2889 | OH2 | TIP3 | 72 | 66.379  | -4.621  | 28.423 | 1.00 | 45.46 |
| ATOM | 2892 | OH2 | TIP3 | 73 | 21.506  | -20.711 | 4.815  | 1.00 | 52.46 |
| ATOM | 2895 | OH2 | TIP3 | 74 | 59.539  | -6.865  | 4.928  | 1.00 | 48.87 |
| ATOM | 2898 | OH2 | TIP3 | 75 | 16.565  | -13.297 | -3.008 | 1.00 | 51.80 |
| ATOM | 2901 | OH2 | TIP3 | 76 | -15.235 | 7.385   | 4.428  | 1.00 | 29.13 |
| ATOM | 2904 | OH2 | TIP3 | 77 | 32.926  | 2.785   | 13.213 | 1.00 | 37.62 |
| ATOM | 2907 | OH2 | TIP3 | 78 | 0.246   | -2.768  | 10.996 | 1.00 | 28.25 |
| ATOM | 2910 | OH2 | TIP3 | 79 | 17.495  | 2.354   | 5.447  | 1.00 | 23.63 |
| ATOM | 2913 | OH2 | TIP3 | 80 | 6.336   | 2.434   | 21.950 | 1.00 | 29.56 |
| ATOM | 2916 | OH2 | TIP3 | 81 | 27.374  | 3.628   | 6.163  | 1.00 | 34.06 |
| ATOM | 2919 | OH2 | TIP3 | 82 | -8.708  | 6.263   | 9.522  | 1.00 | 30.34 |
| ATOM | 2922 | OH2 | TIP3 | 83 | 1.500   | -1.935  | 8.721  | 1.00 | 27.61 |
| ATOM | 2925 | OH2 | TIP3 | 84 | -4.825  | -3.133  | 6.984  | 1.00 | 33.50 |
| ATOM | 2928 | OH2 | TIP3 | 85 | 17.513  | 2.839   | 1.966  | 1.00 | 24.27 |
| ATOM | 2931 | OH2 | TIP3 | 86 | 20.298  | 3.414   | 2.920  | 1.00 | 26.15 |
| ATOM | 2934 | OH2 | TIP3 | 87 | 0.488   | -2.158  | 22.213 | 1.00 | 25.95 |
| ATOM | 2937 | OH2 | TIP3 | 88 | 19.939  | -6.185  | -1.553 | 1.00 | 19.14 |
| ATOM | 2940 | OH2 | TIP3 | 89 | 10.670  | -15.654 | 6.839  | 1.00 | 33.36 |
| ATOM | 2943 | OH2 | TIP3 | 90 | 4.107   | -12.003 | 11.805 | 1.00 | 33.92 |
| ATOM | 2946 | OH2 | TIP3 | 91 | 6.238   | 0.927   | -3.342 | 1.00 | 23.31 |
| ATOM | 2949 | OH2 | TIP3 | 92 | -13.563 | 1.438   | 5.472  | 1.00 | 27.86 |
| ATOM | 2952 | OH2 | TIP3 | 93 | 15.707  | -7.454  | 0.106  | 1.00 | 26.69 |
| ATOM | 2955 | OH2 | TIP3 | 94 | -1.856  | -5.393  | 3.795  | 1.00 | 39.91 |
| ATOM | 2958 | OH2 | TIP3 | 95 | 12.654  | 4.928   | -4.474 | 1.00 | 31.32 |
| ATOM | 2961 | OH2 | TIP3 | 96 | 69.774  | 27.363  | 2.127  | 1.00 | 35.86 |
| ATOM | 2964 | OH2 | TIP3 | 97 | 24.636  | -13.192 | 0.040  | 1.00 | 48.53 |

|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 2967 | OH2 | TIP3 | 98  | 60.453  | -4.625  | 33.829 | 1.00 | 31.97 |
| ATOM | 2970 | OH2 | TIP3 | 99  | 10.513  | 5.719   | 3.487  | 1.00 | 38.90 |
| ATOM | 2973 | OH2 | TIP3 | 100 | -9.499  | -4.011  | 4.342  | 1.00 | 30.61 |
| ATOM | 2976 | OH2 | TIP3 | 101 | 73.056  | -1.608  | 10.514 | 1.00 | 36.08 |
| ATOM | 2979 | OH2 | TIP3 | 102 | -3.152  | 5.709   | 30.608 | 1.00 | 29.38 |
| ATOM | 2982 | OH2 | TIP3 | 103 | 36.630  | 0.702   | 11.792 | 1.00 | 47.80 |
| ATOM | 2985 | OH2 | TIP3 | 104 | 21.475  | 6.325   | 16.924 | 1.00 | 24.03 |
| ATOM | 2988 | OH2 | TIP3 | 105 | 31.272  | 0.656   | 19.432 | 1.00 | 53.74 |
| ATOM | 2991 | OH2 | TIP3 | 106 | 5.620   | -8.417  | 22.266 | 1.00 | 51.90 |
| ATOM | 2994 | OH2 | TIP3 | 107 | -13.144 | 8.294   | 17.464 | 1.00 | 35.23 |
| ATOM | 2997 | OH2 | TIP3 | 108 | 26.680  | -10.556 | -1.042 | 1.00 | 27.83 |
| ATOM | 3000 | OH2 | TIP3 | 109 | 24.149  | 1.846   | 18.172 | 1.00 | 30.90 |
| ATOM | 3003 | OH2 | TIP3 | 110 | -1.943  | 12.643  | 3.558  | 1.00 | 33.82 |
| ATOM | 3006 | OH2 | TIP3 | 111 | 59.560  | 13.617  | 33.196 | 1.00 | 54.79 |
| ATOM | 3009 | OH2 | TIP3 | 112 | 4.351   | -10.740 | 1.991  | 1.00 | 37.96 |
| ATOM | 3012 | OH2 | TIP3 | 113 | 8.396   | 2.913   | 0.958  | 1.00 | 29.64 |
| ATOM | 3015 | OH2 | TIP3 | 114 | 75.905  | 1.753   | 25.812 | 1.00 | 38.73 |
| ATOM | 3018 | OH2 | TIP3 | 115 | 48.783  | 15.535  | 14.189 | 1.00 | 35.24 |
| ATOM | 3021 | OH2 | TIP3 | 116 | 2.419   | -11.312 | 9.146  | 1.00 | 32.85 |
| ATOM | 3024 | OH2 | TIP3 | 117 | 83.014  | 26.360  | 12.964 | 1.00 | 41.83 |
| ATOM | 3027 | OH2 | TIP3 | 118 | 8.761   | -6.579  | -3.252 | 1.00 | 42.78 |
| ATOM | 3030 | OH2 | TIP3 | 119 | -8.417  | 4.493   | 4.305  | 1.00 | 28.32 |
| ATOM | 3033 | OH2 | TIP3 | 120 | 7.908   | -13.690 | 8.639  | 1.00 | 33.73 |
| ATOM | 3036 | OH2 | TIP3 | 121 | 51.437  | 6.329   | 10.373 | 1.00 | 31.72 |
| ATOM | 3039 | OH2 | TIP3 | 122 | 20.660  | 3.686   | 15.591 | 1.00 | 32.37 |
| ATOM | 3042 | OH2 | TIP3 | 123 | 73.039  | 3.790   | 20.450 | 1.00 | 35.80 |
| ATOM | 3045 | OH2 | TIP3 | 124 | 5.155   | -11.467 | 22.590 | 1.00 | 45.12 |
| ATOM | 3048 | OH2 | TIP3 | 125 | 34.172  | 2.412   | 16.576 | 1.00 | 41.90 |
| ATOM | 3051 | OH2 | TIP3 | 126 | 9.597   | -11.905 | 7.083  | 1.00 | 24.83 |
| ATOM | 3054 | OH2 | TIP3 | 127 | 8.276   | 3.860   | -1.622 | 1.00 | 35.46 |
| ATOM | 3057 | OH2 | TIP3 | 128 | 66.282  | 5.755   | 12.352 | 1.00 | 35.43 |
| ATOM | 3060 | OH2 | TIP3 | 129 | 7.377   | 6.932   | 2.982  | 1.00 | 40.68 |
| ATOM | 3063 | OH2 | TIP3 | 130 | 35.832  | -1.778  | 0.201  | 1.00 | 34.99 |
| ATOM | 3066 | OH2 | TIP3 | 131 | 44.781  | 10.362  | 11.064 | 1.00 | 42.31 |
| ATOM | 3069 | OH2 | TIP3 | 132 | 27.790  | -12.638 | 18.958 | 1.00 | 58.71 |
| ATOM | 3072 | OH2 | TIP3 | 133 | 45.221  | 11.540  | 21.428 | 1.00 | 36.75 |
| ATOM | 3075 | OH2 | TIP3 | 134 | 57.560  | -10.846 | 14.099 | 1.00 | 52.90 |
| ATOM | 3078 | OH2 | TIP3 | 135 | -3.354  | 15.001  | 16.515 | 1.00 | 37.81 |
| ATOM | 3081 | OH2 | TIP3 | 136 | 85.717  | 11.251  | 9.062  | 1.00 | 35.18 |
| ATOM | 3084 | OH2 | TIP3 | 137 | 12.951  | -2.469  | 2.075  | 1.00 | 22.07 |
| ATOM | 3087 | OH2 | TIP3 | 138 | 75.645  | 3.486   | 20.527 | 1.00 | 38.01 |
| ATOM | 3090 | OH2 | TIP3 | 139 | 13.237  | 7.412   | -2.649 | 1.00 | 33.50 |
| ATOM | 3093 | OH2 | TIP3 | 140 | 11.262  | -9.970  | 0.974  | 1.00 | 26.14 |
| ATOM | 3096 | OH2 | TIP3 | 141 | 59.480  | 10.772  | 14.098 | 1.00 | 52.08 |
| ATOM | 3099 | OH2 | TIP3 | 142 | 13.869  | -16.121 | 3.919  | 1.00 | 40.06 |
| ATOM | 3102 | OH2 | TIP3 | 143 | -6.407  | -3.413  | 16.641 | 1.00 | 44.38 |
| ATOM | 3105 | OH2 | TIP3 | 144 | 25.667  | -12.645 | 3.411  | 1.00 | 48.28 |
| ATOM | 3108 | OH2 | TIP3 | 145 | -16.282 | 10.641  | 6.423  | 1.00 | 40.94 |
| ATOM | 3111 | OH2 | TIP3 | 146 | 86.637  | 12.861  | 7.008  | 1.00 | 39.45 |
| ATOM | 3114 | OH2 | TIP3 | 147 | 32.082  | -4.569  | 1.892  | 1.00 | 27.35 |
| ATOM | 3117 | OH2 | TIP3 | 148 | 44.809  | 7.627   | 11.670 | 1.00 | 35.65 |
| ATOM | 3120 | OH2 | TIP3 | 149 | 80.693  | 12.459  | 16.523 | 1.00 | 37.21 |
| ATOM | 3123 | OH2 | TIP3 | 150 | 2.941   | -7.118  | -1.805 | 1.00 | 38.43 |
| ATOM | 3126 | OH2 | TIP3 | 151 | 31.794  | -6.086  | 20.704 | 1.00 | 42.80 |

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|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 3129 | OH2 | TIP3 | 152 | 74.770  | -2.683  | 12.398 | 1.00 | 40.40 |
| ATOM | 3132 | OH2 | TIP3 | 153 | 7.731   | 6.640   | -1.037 | 1.00 | 35.61 |
| ATOM | 3135 | OH2 | TIP3 | 154 | 71.617  | 5.599   | 21.838 | 1.00 | 40.14 |
| ATOM | 3138 | OH2 | TIP3 | 155 | 68.113  | -4.968  | 8.886  | 1.00 | 34.38 |
| ATOM | 3141 | OH2 | TIP3 | 156 | 0.042   | -9.364  | 7.055  | 1.00 | 33.08 |
| ATOM | 3144 | OH2 | TIP3 | 157 | 68.020  | 18.352  | 10.995 | 1.00 | 34.76 |
| ATOM | 3147 | OH2 | TIP3 | 158 | 3.795   | 8.550   | 4.533  | 1.00 | 34.69 |
| ATOM | 3150 | OH2 | TIP3 | 159 | 52.106  | 11.746  | 18.410 | 1.00 | 40.06 |
| ATOM | 3153 | OH2 | TIP3 | 160 | 6.414   | 3.927   | 16.889 | 1.00 | 37.07 |
| ATOM | 3156 | OH2 | TIP3 | 161 | -10.282 | 6.603   | 4.715  | 1.00 | 38.48 |
| ATOM | 3159 | OH2 | TIP3 | 162 | 76.410  | 1.681   | -0.781 | 1.00 | 42.87 |
| ATOM | 3162 | OH2 | TIP3 | 163 | 9.910   | -12.046 | 17.157 | 1.00 | 32.79 |
| ATOM | 3165 | OH2 | TIP3 | 164 | 33.983  | 14.219  | 18.191 | 1.00 | 37.35 |
| ATOM | 3168 | OH2 | TIP3 | 165 | 2.330   | -7.952  | 16.978 | 1.00 | 44.25 |
| ATOM | 3171 | OH2 | TIP3 | 166 | 29.701  | 1.780   | 5.987  | 1.00 | 39.86 |
| ATOM | 3174 | OH2 | TIP3 | 167 | 32.494  | -17.319 | 11.798 | 1.00 | 38.46 |
| ATOM | 3177 | OH2 | TIP3 | 168 | 42.107  | 17.932  | 10.978 | 1.00 | 44.83 |
| ATOM | 3180 | OH2 | TIP3 | 169 | 87.822  | 10.537  | 5.568  | 1.00 | 54.30 |
| ATOM | 3183 | OH2 | TIP3 | 170 | 70.261  | -4.143  | 25.064 | 1.00 | 44.75 |
| ATOM | 3186 | OH2 | TIP3 | 171 | 77.519  | 5.882   | 23.891 | 1.00 | 42.67 |
| ATOM | 3189 | OH2 | TIP3 | 172 | -0.921  | -8.166  | 4.521  | 1.00 | 45.91 |
| ATOM | 3192 | OH2 | TIP3 | 173 | 34.213  | 15.329  | 1.478  | 1.00 | 40.10 |
| ATOM | 3195 | OH2 | TIP3 | 174 | -9.647  | 7.731   | 7.383  | 1.00 | 35.63 |
| ATOM | 3198 | OH2 | TIP3 | 175 | 11.619  | 5.799   | 7.440  | 1.00 | 36.36 |
| ATOM | 3201 | OH2 | TIP3 | 176 | -8.709  | 13.964  | 13.507 | 1.00 | 51.97 |
| ATOM | 3204 | OH2 | TIP3 | 177 | 31.770  | 3.376   | 18.354 | 1.00 | 46.26 |
| ATOM | 3207 | OH2 | TIP3 | 178 | -8.494  | 9.789   | 24.269 | 1.00 | 50.98 |
| ATOM | 3210 | OH2 | TIP3 | 179 | -1.234  | -6.253  | 15.622 | 1.00 | 38.47 |
| ATOM | 3213 | OH2 | TIP3 | 180 | 80.252  | 0.887   | 15.691 | 1.00 | 39.48 |
| ATOM | 3216 | OH2 | TIP3 | 181 | 67.248  | 20.272  | -1.555 | 1.00 | 48.22 |
| ATOM | 3219 | OH2 | TIP3 | 182 | -0.566  | 4.367   | 1.362  | 1.00 | 39.84 |
| ATOM | 3222 | OH2 | TIP3 | 183 | 0.120   | 6.523   | 2.615  | 1.00 | 33.11 |
| ATOM | 3225 | OH2 | TIP3 | 184 | -1.496  | 8.789   | 1.237  | 1.00 | 41.03 |
| ATOM | 3228 | OH2 | TIP3 | 185 | -5.143  | 9.130   | 2.236  | 1.00 | 40.47 |
| ATOM | 3231 | OH2 | TIP3 | 186 | -7.275  | 10.106  | 3.833  | 1.00 | 40.55 |
| ATOM | 3234 | OH2 | TIP3 | 187 | 2.717   | 7.275   | 0.769  | 1.00 | 44.67 |
| ATOM | 3237 | OH2 | TIP3 | 188 | 5.176   | 10.645  | 8.459  | 1.00 | 34.48 |
| ATOM | 3240 | OH2 | TIP3 | 189 | 63.822  | 12.690  | 22.883 | 1.00 | 41.88 |
| ATOM | 3243 | OH2 | TIP3 | 190 | 79.109  | 1.028   | 18.201 | 1.00 | 46.40 |
| ATOM | 3246 | OH2 | TIP3 | 191 | 59.332  | -11.681 | 7.236  | 1.00 | 63.45 |
| ATOM | 3249 | OH2 | TIP3 | 192 | 13.967  | -1.218  | -4.268 | 1.00 | 34.79 |
| ATOM | 3252 | OH2 | TIP3 | 193 | 59.444  | 2.867   | 33.368 | 1.00 | 41.00 |
| ATOM | 3255 | OH2 | TIP3 | 194 | 32.024  | 13.487  | 19.852 | 1.00 | 53.61 |
| ATOM | 3258 | OH2 | TIP3 | 195 | 72.101  | 16.218  | 22.802 | 1.00 | 44.03 |
| ATOM | 3261 | OH2 | TIP3 | 196 | 0.987   | -8.546  | 14.474 | 1.00 | 41.38 |
| ATOM | 3264 | OH2 | TIP3 | 197 | -0.491  | 5.461   | 30.372 | 1.00 | 38.51 |
| ATOM | 3267 | OH2 | TIP3 | 198 | 61.179  | 6.795   | 11.905 | 1.00 | 41.77 |
| ATOM | 3270 | OH2 | TIP3 | 199 | -1.365  | -4.128  | 27.656 | 1.00 | 50.98 |
| ATOM | 3273 | OH2 | TIP3 | 200 | 81.440  | 15.558  | 17.262 | 1.00 | 44.47 |
| ATOM | 3276 | OH2 | TIP3 | 201 | -17.491 | 4.116   | 23.873 | 1.00 | 50.58 |
| ATOM | 3279 | OH2 | TIP3 | 202 | 27.546  | 10.513  | 14.499 | 1.00 | 39.06 |
| ATOM | 3282 | OH2 | TIP3 | 203 | 34.992  | 4.513   | 27.719 | 1.00 | 49.89 |
| ATOM | 3285 | OH2 | TIP3 | 204 | -3.486  | -4.591  | 9.171  | 1.00 | 49.53 |
| ATOM | 3288 | OH2 | TIP3 | 205 | 42.799  | 7.848   | 22.320 | 1.00 | 43.50 |



|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 3291 | OH2 | TIP3 | 206 | 52.728  | 11.884  | 21.811 | 1.00 | 39.98 |
| ATOM | 3294 | OH2 | TIP3 | 207 | 26.706  | 14.069  | 19.833 | 1.00 | 46.68 |
| ATOM | 3297 | OH2 | TIP3 | 208 | -7.154  | 8.907   | 6.444  | 1.00 | 42.83 |
| ATOM | 3300 | OH2 | TIP3 | 209 | 86.648  | 5.606   | 16.034 | 1.00 | 51.15 |
| ATOM | 3303 | OH2 | TIP3 | 210 | 54.879  | 15.840  | 20.379 | 1.00 | 50.23 |
| ATOM | 3306 | OH2 | TIP3 | 211 | 51.417  | 19.473  | 22.691 | 1.00 | 48.35 |
| ATOM | 3309 | OH2 | TIP3 | 212 | 20.102  | 6.924   | 7.085  | 1.00 | 38.15 |
| ATOM | 3312 | OH2 | TIP3 | 213 | 28.991  | 1.941   | -3.570 | 1.00 | 47.39 |
| ATOM | 3315 | OH2 | TIP3 | 214 | 26.505  | 2.386   | -4.633 | 1.00 | 46.48 |
| ATOM | 3318 | OH2 | TIP3 | 215 | 36.482  | 2.810   | 18.521 | 1.00 | 46.26 |
| ATOM | 3321 | OH2 | TIP3 | 216 | 16.941  | -20.504 | 14.128 | 1.00 | 49.74 |
| ATOM | 3324 | OH2 | TIP3 | 217 | 28.572  | -14.448 | 6.157  | 1.00 | 49.13 |
| ATOM | 3327 | OH2 | TIP3 | 218 | 31.380  | 1.471   | -1.998 | 1.00 | 43.02 |
| ATOM | 3330 | OH2 | TIP3 | 219 | 10.065  | -16.338 | 15.455 | 1.00 | 42.75 |
| ATOM | 3333 | OH2 | TIP3 | 220 | 7.350   | -11.974 | 5.652  | 1.00 | 55.35 |
| ATOM | 3336 | OH2 | TIP3 | 221 | -12.328 | 14.547  | 10.986 | 1.00 | 51.29 |
| ATOM | 3339 | OH2 | TIP3 | 222 | 11.186  | 9.609   | -1.388 | 1.00 | 37.68 |
| ATOM | 3342 | OH2 | TIP3 | 223 | 11.389  | 12.276  | -1.400 | 1.00 | 46.93 |
| ATOM | 3345 | OH2 | TIP3 | 224 | 34.202  | 13.069  | -1.161 | 1.00 | 41.79 |
| ATOM | 3348 | OH2 | TIP3 | 225 | 31.303  | 17.822  | 7.853  | 1.00 | 48.21 |
| ATOM | 3351 | OH2 | TIP3 | 226 | 36.875  | 11.804  | -2.106 | 1.00 | 59.03 |
| ATOM | 3354 | OH2 | TIP3 | 227 | 35.134  | 3.048   | 11.020 | 1.00 | 50.41 |
| ATOM | 3357 | OH2 | TIP3 | 228 | 63.950  | 13.409  | 26.627 | 1.00 | 43.40 |
| ATOM | 3360 | OH2 | TIP3 | 229 | 36.367  | 6.116   | 15.221 | 1.00 | 57.79 |
| ATOM | 3363 | OH2 | TIP3 | 230 | 90.606  | 4.355   | 6.342  | 1.00 | 47.53 |
| ATOM | 3366 | OH2 | TIP3 | 231 | 50.038  | -11.673 | 10.767 | 1.00 | 56.90 |
| ATOM | 3369 | OH2 | TIP3 | 232 | 60.196  | -10.144 | 16.590 | 1.00 | 51.61 |
| ATOM | 3372 | OH2 | TIP3 | 233 | 18.021  | -21.179 | 7.008  | 1.00 | 49.93 |
| ATOM | 3375 | OH2 | TIP3 | 234 | 66.236  | -1.218  | 30.583 | 1.00 | 39.55 |
| ATOM | 3378 | OH2 | TIP3 | 235 | 74.959  | 18.928  | 20.659 | 1.00 | 38.04 |
| ATOM | 3381 | OH2 | TIP3 | 236 | -2.816  | 10.082  | 3.187  | 1.00 | 49.31 |
| ATOM | 3384 | OH2 | TIP3 | 237 | 5.894   | -3.410  | 25.289 | 1.00 | 35.55 |
| ATOM | 3387 | OH2 | TIP3 | 238 | 35.784  | 6.047   | 12.543 | 1.00 | 41.96 |
| ATOM | 3390 | OH2 | TIP3 | 239 | -5.400  | 16.537  | 14.180 | 1.00 | 43.13 |
| ATOM | 3393 | OH2 | TIP3 | 240 | 46.589  | -11.622 | 26.970 | 1.00 | 43.71 |
| ATOM | 3396 | OH2 | TIP3 | 241 | 6.199   | 6.592   | 13.797 | 1.00 | 46.51 |
| ATOM | 3399 | OH2 | TIP3 | 242 | -3.777  | -5.158  | 20.907 | 1.00 | 42.08 |
| ATOM | 3402 | OH2 | TIP3 | 243 | 1.969   | -3.711  | -0.282 | 1.00 | 37.38 |
| ATOM | 3405 | OH2 | TIP3 | 244 | 86.200  | 11.629  | 22.877 | 1.00 | 56.51 |
| ATOM | 3408 | OH2 | TIP3 | 245 | 10.557  | 7.565   | 5.514  | 1.00 | 47.58 |
| ATOM | 3411 | OH2 | TIP3 | 246 | 4.802   | 8.149   | 2.136  | 1.00 | 50.70 |
| ATOM | 3414 | OH2 | TIP3 | 247 | 64.590  | -8.128  | 20.596 | 1.00 | 43.65 |
| ATOM | 3417 | OH2 | TIP3 | 248 | 11.346  | -17.840 | 13.283 | 1.00 | 47.64 |
| ATOM | 3420 | OH2 | TIP3 | 249 | 42.116  | -6.808  | 14.953 | 1.00 | 53.79 |
| ATOM | 3423 | OH2 | TIP3 | 250 | 2.745   | -4.054  | 22.128 | 1.00 | 60.88 |
| ATOM | 3426 | OH2 | TIP3 | 251 | 71.999  | 1.177   | -2.124 | 1.00 | 47.90 |
| ATOM | 3429 | OH2 | TIP3 | 252 | 50.328  | -3.210  | 33.068 | 1.00 | 57.01 |
| ATOM | 3435 | OH2 | TIP3 | 253 | 57.838  | 9.337   | 11.631 | 1.00 | 52.55 |
| ATOM | 3438 | OH2 | TIP3 | 254 | 43.373  | 20.489  | 30.490 | 1.00 | 51.97 |
| ATOM | 3441 | OH2 | TIP3 | 255 | 67.045  | 16.529  | 15.793 | 1.00 | 49.02 |
| ATOM | 3444 | OH2 | TIP3 | 256 | 87.509  | 21.566  | 5.114  | 1.00 | 54.21 |
| ATOM | 3447 | OH2 | TIP3 | 257 | 21.060  | 10.052  | -9.215 | 1.00 | 60.32 |
| ATOM | 3450 | OH2 | TIP3 | 258 | 11.827  | 2.450   | 27.951 | 1.00 | 54.26 |
| ATOM | 3453 | OH2 | TIP3 | 259 | 64.788  | -0.418  | 3.563  | 1.00 | 50.94 |

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|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 3456 | OH2 | TIP3 | 260 | 71.859  | 28.473  | 7.950  | 1.00 | 62.81 |
| ATOM | 3459 | OH2 | TIP3 | 261 | 25.605  | -8.106  | 27.287 | 1.00 | 52.81 |
| ATOM | 3462 | OH2 | TIP3 | 262 | -18.804 | 10.886  | 12.628 | 1.00 | 55.25 |
| ATOM | 3465 | OH2 | TIP3 | 263 | 30.652  | 11.349  | 16.201 | 1.00 | 50.40 |
| ATOM | 3468 | OH2 | TIP3 | 264 | 22.350  | -16.098 | -2.742 | 1.00 | 53.27 |
| ATOM | 3471 | OH2 | TIP3 | 265 | 29.720  | 9.106   | 18.465 | 1.00 | 57.23 |

TABLE 2

| Atom<br>No. | Atom<br>Type | A.A<br>Type | A.A<br>No. | X       | Y      | Z      | OCC  | B     |
|-------------|--------------|-------------|------------|---------|--------|--------|------|-------|
| ATOM 1      | N            | GLU         | 1464       | -13.425 | 16.769 | 8.973  | 1.00 | 61.21 |
| ATOM 3      | CA           | GLU         | 1464       | -12.536 | 16.852 | 7.821  | 1.00 | 59.70 |
| ATOM 4      | CB           | GLU         | 1464       | -11.383 | 17.829 | 8.085  | 1.00 | 60.05 |
| ATOM 5      | C            | GLU         | 1464       | -11.998 | 15.478 | 7.427  | 1.00 | 57.11 |
| ATOM 6      | O            | GLU         | 1464       | -12.134 | 15.076 | 6.274  | 1.00 | 59.75 |
| ATOM 7      | N            | LEU         | 1465       | -11.406 | 14.749 | 8.368  | 1.00 | 52.21 |
| ATOM 9      | CA           | LEU         | 1465       | -10.871 | 13.424 | 8.062  | 1.00 | 46.72 |
| ATOM 10     | CB           | LEU         | 1465       | -10.102 | 12.844 | 9.249  | 1.00 | 44.98 |
| ATOM 11     | CG           | LEU         | 1465       | -8.608  | 13.123 | 9.384  | 1.00 | 46.11 |
| ATOM 12     | CD1          | LEU         | 1465       | -8.338  | 14.592 | 9.663  | 1.00 | 51.13 |
| ATOM 13     | CD2          | LEU         | 1465       | -8.064  | 12.286 | 10.512 | 1.00 | 4.99  |
| ATOM 14     | C            | LEU         | 1465       | -12.000 | 12.475 | 7.700  | 1.00 | 44.16 |
| ATOM 15     | O            | LEU         | 1465       | -13.101 | 12.577 | 8.239  | 1.00 | 44.04 |
| ATOM 16     | N            | PRO         | 1466       | -11.760 | 11.580 | 6.732  | 1.00 | 42.53 |
| ATOM 17     | CD           | PRO         | 1466       | -10.535 | 11.534 | 5.913  | 1.00 | 41.30 |
| ATOM 18     | CA           | PRO         | 1466       | -12.740 | 10.591 | 6.269  | 1.00 | 41.16 |
| ATOM 19     | CB           | PRO         | 1466       | -12.134 | 10.111 | 4.959  | 1.00 | 41.48 |
| ATOM 20     | CG           | PRO         | 1466       | -10.658 | 10.213 | 5.220  | 1.00 | 41.30 |
| ATOM 21     | C            | PRO         | 1466       | -12.906 | 9.441  | 7.261  | 1.00 | 41.31 |
| ATOM 22     | O            | PRO         | 1466       | -11.929 | 8.936  | 7.816  | 1.00 | 41.05 |
| ATOM 23     | N            | GLU         | 1467       | -14.145 | 9.044  | 7.500  | 1.00 | 41.02 |
| ATOM 25     | CA           | GLU         | 1467       | -14.428 | 7.960  | 8.427  | 1.00 | 42.42 |
| ATOM 26     | CB           | GLU         | 1467       | -15.931 | 7.904  | 8.712  | 1.00 | 47.98 |
| ATOM 27     | CG           | GLU         | 1467       | -16.565 | 9.238  | 9.105  | 1.00 | 52.79 |
| ATOM 28     | CD           | GLU         | 1467       | -17.998 | 9.093  | 9.606  | 1.00 | 54.21 |
| ATOM 29     | OE1          | GLU         | 1467       | -18.474 | 7.949  | 9.741  | 1.00 | 58.90 |
| ATOM 30     | OE2          | GLU         | 1467       | -18.650 | 10.120 | 9.879  | 1.00 | 55.90 |
| ATOM 31     | C            | GLU         | 1467       | -13.972 | 6.628  | 7.837  | 1.00 | 40.93 |
| ATOM 32     | O            | GLU         | 1467       | -14.061 | 6.426  | 6.620  | 1.00 | 44.32 |
| ATOM 33     | N            | ASP         | 1468       | -13.473 | 5.731  | 8.689  | 1.00 | 35.10 |
| ATOM 35     | CA           | ASP         | 1468       | -13.024 | 4.404  | 8.256  | 1.00 | 31.82 |
| ATOM 36     | CB           | ASP         | 1468       | -11.507 | 4.358  | 7.992  | 1.00 | 30.65 |
| ATOM 37     | CG           | ASP         | 1468       | -11.025 | 3.002  | 7.440  | 1.00 | 29.93 |
| ATOM 38     | OD1          | ASP         | 1468       | -11.689 | 1.958  | 7.603  | 1.00 | 29.63 |
| ATOM 39     | OD2          | ASP         | 1468       | -9.945  | 2.974  | 6.835  | 1.00 | 33.63 |
| ATOM 40     | C            | ASP         | 1468       | -13.394 | 3.441  | 9.369  | 1.00 | 31.81 |
| ATOM 41     | O            | ASP         | 1468       | -12.618 | 3.209  | 10.302 | 1.00 | 31.91 |
| ATOM 42     | N            | PRO         | 1469       | -14.569 | 2.819  | 9.247  | 1.00 | 29.68 |
| ATOM 43     | CD           | PRO         | 1469       | -15.482 | 2.963  | 8.097  | 1.00 | 28.33 |
| ATOM 44     | CA           | PRO         | 1469       | -15.100 | 1.863  | 10.220 | 1.00 | 31.80 |
| ATOM 45     | CB           | PRO         | 1469       | -16.352 | 1.331  | 9.510  | 1.00 | 32.51 |
| ATOM 46     | CG           | PRO         | 1469       | -16.783 | 2.496  | 8.656  | 1.00 | 27.41 |
| ATOM 47     | C            | PRO         | 1469       | -14.146 | 0.731  | 10.590 | 1.00 | 30.44 |
| ATOM 48     | O            | PRO         | 1469       | -14.272 | 0.135  | 11.654 | 1.00 | 30.02 |
| ATOM 49     | N            | ARG         | 1470       | -13.198 | 0.442  | 9.704  | 1.00 | 31.06 |
| ATOM 51     | CA           | ARG         | 1470       | -12.240 | -0.636 | 9.917  | 1.00 | 31.86 |
| ATOM 52     | CB           | ARG         | 1470       | -11.386 | -0.860 | 8.660  | 1.00 | 31.36 |
| ATOM 53     | CG           | ARG         | 1470       | -12.107 | -1.437 | 7.448  | 1.00 | 33.08 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 54  | CD  | ARG | 1470 | -11.148 | -1.588 | 6.248  | 1.00 | 31.08 |
| ATOM | 55  | NE  | ARG | 1470 | -10.540 | -0.310 | 5.891  | 1.00 | 34.36 |
| ATOM | 57  | CZ  | ARG | 1470 | -9.656  | -0.135 | 4.919  | 1.00 | 33.32 |
| ATOM | 58  | NH1 | ARG | 1470 | -9.260  | -1.164 | 4.185  | 1.00 | 35.90 |
| ATOM | 61  | NH2 | ARG | 1470 | -9.155  | 1.074  | 4.687  | 1.00 | 32.79 |
| ATOM | 64  | C   | ARG | 1470 | -11.290 | -0.436 | 11.095 | 1.00 | 32.68 |
| ATOM | 65  | O   | ARG | 1470 | -10.820 | -1.410 | 11.683 | 1.00 | 33.43 |
| ATOM | 66  | N   | TRP | 1471 | -11.031 | 0.814  | 11.456 | 1.00 | 31.84 |
| ATOM | 68  | CA  | TRP | 1471 | -10.063 | 1.090  | 12.505 | 1.00 | 31.17 |
| ATOM | 69  | CB  | TRP | 1471 | -8.816  | 1.677  | 11.850 | 1.00 | 30.15 |
| ATOM | 70  | CG  | TRP | 1471 | -8.173  | 0.725  | 10.941 | 1.00 | 29.54 |
| ATOM | 71  | CD2 | TRP | 1471 | -7.288  | -0.329 | 11.315 | 1.00 | 31.07 |
| ATOM | 72  | CE2 | TRP | 1471 | -6.913  | -0.992 | 10.132 | 1.00 | 34.41 |
| ATOM | 73  | CE3 | TRP | 1471 | -6.762  | -0.768 | 12.536 | 1.00 | 29.46 |
| ATOM | 74  | CD1 | TRP | 1471 | -8.309  | 0.660  | 9.587  | 1.00 | 30.20 |
| ATOM | 75  | NE1 | TRP | 1471 | -7.557  | -0.371 | 9.089  | 1.00 | 33.09 |
| ATOM | 77  | CZ2 | TRP | 1471 | -6.042  | -2.085 | 10.135 | 1.00 | 31.68 |
| ATOM | 78  | CZ3 | TRP | 1471 | -5.897  | -1.853 | 12.540 | 1.00 | 29.65 |
| ATOM | 79  | CH2 | TRP | 1471 | -5.541  | -2.494 | 11.347 | 1.00 | 30.18 |
| ATOM | 80  | C   | TRP | 1471 | -10.477 | 2.019  | 13.620 | 1.00 | 29.94 |
| ATOM | 81  | O   | TRP | 1471 | -9.782  | 2.108  | 14.631 | 1.00 | 30.00 |
| ATOM | 82  | N   | GLU | 1472 | -11.573 | 2.737  | 13.416 | 1.00 | 29.06 |
| ATOM | 84  | CA  | GLU | 1472 | -12.051 | 3.706  | 14.380 | 1.00 | 28.62 |
| ATOM | 85  | CB  | GLU | 1472 | -13.312 | 4.386  | 13.849 | 1.00 | 29.16 |
| ATOM | 86  | CG  | GLU | 1472 | -13.641 | 5.733  | 14.529 | 1.00 | 30.74 |
| ATOM | 87  | CD  | GLU | 1472 | -12.676 | 6.848  | 14.156 | 1.00 | 30.05 |
| ATOM | 88  | OE1 | GLU | 1472 | -12.090 | 6.799  | 13.057 | 1.00 | 31.32 |
| ATOM | 89  | OE2 | GLU | 1472 | -12.511 | 7.784  | 14.961 | 1.00 | 30.26 |
| ATOM | 90  | C   | GLU | 1472 | -12.327 | 3.159  | 15.767 | 1.00 | 28.70 |
| ATOM | 91  | O   | GLU | 1472 | -12.969 | 2.125  | 15.916 | 1.00 | 31.01 |
| ATOM | 92  | N   | LEU | 1473 | -11.810 | 3.842  | 16.781 | 1.00 | 27.38 |
| ATOM | 94  | CA  | LEU | 1473 | -12.054 | 3.451  | 18.161 | 1.00 | 29.61 |
| ATOM | 95  | CB  | LEU | 1473 | -10.763 | 3.073  | 18.899 | 1.00 | 28.56 |
| ATOM | 96  | CG  | LEU | 1473 | -10.923 | 2.756  | 20.403 | 1.00 | 30.06 |
| ATOM | 97  | CD1 | LEU | 1473 | -11.485 | 1.354  | 20.639 | 1.00 | 28.42 |
| ATOM | 98  | CD2 | LEU | 1473 | -9.595  | 2.876  | 21.115 | 1.00 | 28.15 |
| ATOM | 99  | C   | LEU | 1473 | -12.617 | 4.714  | 18.764 | 1.00 | 31.81 |
| ATOM | 100 | O   | LEU | 1473 | -12.179 | 5.814  | 18.407 | 1.00 | 33.00 |
| ATOM | 101 | N   | PRO | 1474 | -13.670 | 4.591  | 19.596 | 1.00 | 31.45 |
| ATOM | 102 | CD  | PRO | 1474 | -14.488 | 3.400  | 19.859 | 1.00 | 31.72 |
| ATOM | 103 | CA  | PRO | 1474 | -14.261 | 5.774  | 20.226 | 1.00 | 31.23 |
| ATOM | 104 | CB  | PRO | 1474 | -15.400 | 5.176  | 21.048 | 1.00 | 29.01 |
| ATOM | 105 | CG  | PRO | 1474 | -15.815 | 4.005  | 20.247 | 1.00 | 29.09 |
| ATOM | 106 | C   | PRO | 1474 | -13.217 | 6.444  | 21.120 | 1.00 | 33.36 |
| ATOM | 107 | O   | PRO | 1474 | -12.447 | 5.765  | 21.808 | 1.00 | 36.40 |
| ATOM | 108 | N   | ARG | 1475 | -13.188 | 7.770  | 21.112 | 1.00 | 33.67 |
| ATOM | 110 | CA  | ARG | 1475 | -12.228 | 8.498  | 21.924 | 1.00 | 33.96 |
| ATOM | 111 | CB  | ARG | 1475 | -12.433 | 9.991  | 21.735 | 1.00 | 35.31 |
| ATOM | 112 | CG  | ARG | 1475 | -12.134 | 10.405 | 20.333 | 1.00 | 40.10 |
| ATOM | 113 | CD  | ARG | 1475 | -12.060 | 11.906 | 20.145 | 1.00 | 42.98 |
| ATOM | 114 | NE  | ARG | 1475 | -11.785 | 12.194 | 18.737 | 1.00 | 42.91 |
| ATOM | 116 | CZ  | ARG | 1475 | -10.578 | 12.443 | 18.253 | 1.00 | 41.30 |
| ATOM | 117 | NH1 | ARG | 1475 | -9.529  | 12.467 | 19.064 | 1.00 | 41.88 |
| ATOM | 120 | NH2 | ARG | 1475 | -10.413 | 12.567 | 16.943 | 1.00 | 40.98 |

|      |     |     |     |       |         |        |        |      |       |
|------|-----|-----|-----|-------|---------|--------|--------|------|-------|
| ATOM | 123 | C   | ARG | 1475° | -12.278 | 8.142  | 23.404 | 1.00 | 35.88 |
| ATOM | 124 | O   | ARG | 1475  | -11.240 | 8.046  | 24.061 | 1.00 | 37.10 |
| ATOM | 125 | N   | ASP | 1476  | -13.479 | 7.920  | 23.928 | 1.00 | 36.47 |
| ATOM | 127 | CA  | ASP | 1476  | -13.632 | 7.581  | 25.335 | 1.00 | 37.24 |
| ATOM | 128 | CB  | ASP | 1476  | -15.112 | 7.629  | 25.741 | 1.00 | 39.66 |
| ATOM | 129 | CG  | ASP | 1476  | -15.930 | 6.480  | 25.163 | 1.00 | 42.38 |
| ATOM | 130 | OD1 | ASP | 1476  | -15.438 | 5.706  | 24.322 | 1.00 | 47.52 |
| ATOM | 131 | OD2 | ASP | 1476  | -17.098 | 6.349  | 25.568 | 1.00 | 48.06 |
| ATOM | 132 | C   | ASP | 1476  | -13.023 | 6.232  | 25.724 | 1.00 | 36.93 |
| ATOM | 133 | O   | ASP | 1476  | -13.034 | 5.856  | 26.898 | 1.00 | 40.09 |
| ATOM | 134 | N   | ARG | 1477  | -12.564 | 5.475  | 24.732 | 1.00 | 34.34 |
| ATOM | 136 | CA  | ARG | 1477  | -11.961 | 4.171  | 24.993 | 1.00 | 32.47 |
| ATOM | 137 | CB  | ARG | 1477  | -12.269 | 3.212  | 23.852 | 1.00 | 31.59 |
| ATOM | 138 | CG  | ARG | 1477  | -13.716 | 2.939  | 23.640 | 1.00 | 29.66 |
| ATOM | 139 | CD  | ARG | 1477  | -14.314 | 2.342  | 24.875 | 1.00 | 30.65 |
| ATOM | 140 | NE  | ARG | 1477  | -14.498 | 3.342  | 25.918 | 1.00 | 31.37 |
| ATOM | 142 | CZ  | ARG | 1477  | -14.822 | 3.055  | 27.174 | 1.00 | 32.81 |
| ATOM | 143 | NH1 | ARG | 1477  | -15.002 | 1.794  | 27.549 | 1.00 | 33.92 |
| ATOM | 146 | NH2 | ARG | 1477  | -14.950 | 4.025  | 28.062 | 1.00 | 31.74 |
| ATOM | 149 | C   | ARG | 1477  | -10.452 | 4.266  | 25.153 | 1.00 | 33.13 |
| ATOM | 150 | O   | ARG | 1477  | -9.777  | 3.281  | 25.445 | 1.00 | 33.55 |
| ATOM | 151 | N   | LEU | 1478  | -9.923  | 5.466  | 24.984 | 1.00 | 34.43 |
| ATOM | 153 | CA  | LEU | 1478  | -8.493  | 5.663  | 25.076 | 1.00 | 35.68 |
| ATOM | 154 | CB  | LEU | 1478  | -8.008  | 6.350  | 23.790 | 1.00 | 34.98 |
| ATOM | 155 | CG  | LEU | 1478  | -6.581  | 6.137  | 23.284 | 1.00 | 31.11 |
| ATOM | 156 | CD1 | LEU | 1478  | -6.280  | 4.650  | 23.161 | 1.00 | 26.62 |
| ATOM | 157 | CD2 | LEU | 1478  | -6.428  | 6.839  | 21.940 | 1.00 | 28.80 |
| ATOM | 158 | C   | LEU | 1478  | -8.158  | 6.505  | 26.295 | 1.00 | 36.21 |
| ATOM | 159 | O   | LEU | 1478  | -8.501  | 7.688  | 26.361 | 1.00 | 39.67 |
| ATOM | 160 | N   | VAL | 1479  | -7.558  | 5.878  | 27.293 | 1.00 | 35.42 |
| ATOM | 162 | CA  | VAL | 1479  | -7.156  | 6.599  | 28.491 | 1.00 | 35.80 |
| ATOM | 163 | CB  | VAL | 1479  | -7.269  | 5.707  | 29.742 | 1.00 | 36.29 |
| ATOM | 164 | CG1 | VAL | 1479  | -7.017  | 6.527  | 30.983 | 1.00 | 37.23 |
| ATOM | 165 | CG2 | VAL | 1479  | -8.650  | 5.059  | 29.812 | 1.00 | 34.41 |
| ATOM | 166 | C   | VAL | 1479  | -5.704  | 7.046  | 28.244 | 1.00 | 35.68 |
| ATOM | 167 | O   | VAL | 1479  | -4.764  | 6.246  | 28.319 | 1.00 | 33.45 |
| ATOM | 168 | N   | LEU | 1480  | -5.538  | 8.315  | 27.885 | 1.00 | 38.15 |
| ATOM | 170 | CA  | LEU | 1480  | -4.213  | 8.860  | 27.584 | 1.00 | 42.61 |
| ATOM | 171 | CB  | LEU | 1480  | -4.332  | 10.205 | 26.857 | 1.00 | 39.14 |
| ATOM | 172 | CG  | LEU | 1480  | -4.969  | 10.179 | 25.460 | 1.00 | 38.44 |
| ATOM | 173 | CD1 | LEU | 1480  | -4.901  | 11.579 | 24.879 | 1.00 | 39.39 |
| ATOM | 174 | CD2 | LEU | 1480  | -4.263  | 9.194  | 24.533 | 1.00 | 36.86 |
| ATOM | 175 | C   | LEU | 1480  | -3.274  | 8.970  | 28.783 | 1.00 | 46.37 |
| ATOM | 176 | O   | LEU | 1480  | -3.659  | 9.445  | 29.850 | 1.00 | 48.86 |
| ATOM | 177 | N   | GLY | 1481  | -2.033  | 8.537  | 28.594 | 1.00 | 47.13 |
| ATOM | 179 | CA  | GLY | 1481  | -1.081  | 8.573  | 29.678 | 1.00 | 48.19 |
| ATOM | 180 | C   | GLY | 1481  | 0.163   | 9.388  | 29.425 | 1.00 | 50.27 |
| ATOM | 181 | O   | GLY | 1481  | 0.152   | 10.367 | 28.675 | 1.00 | 51.19 |
| ATOM | 182 | N   | LYS | 1482  | 1.240   | 8.965  | 30.078 | 1.00 | 50.93 |
| ATOM | 184 | CA  | LYS | 1482  | 2.543   | 9.606  | 30.007 | 1.00 | 50.94 |
| ATOM | 185 | CB  | LYS | 1482  | 3.509   | 8.866  | 30.933 | 1.00 | 50.41 |
| ATOM | 186 | CG  | LYS | 1482  | 4.971   | 9.026  | 30.567 | 1.00 | 51.87 |
| ATOM | 187 | CD  | LYS | 1482  | 5.810   | 7.874  | 31.087 | 1.00 | 53.49 |
| ATOM | 188 | CE  | LYS | 1482  | 5.390   | 6.542  | 30.478 | 1.00 | 50.77 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 189 | NZ  | LYS | 1482 | 6.251  | 5.433  | 30.986 | 1.00 | 49.92 |
| ATOM | 193 | C   | LYS | 1482 | 3.145  | 9.676  | 28.609 | 1.00 | 52.31 |
| ATOM | 194 | O   | LYS | 1482 | 3.115  | 8.700  | 27.851 | 1.00 | 52.30 |
| ATOM | 195 | N   | PRO | 1483 | 3.706  | 10.838 | 28.250 | 1.00 | 53.47 |
| ATOM | 196 | CD  | PRO | 1483 | 3.667  | 12.105 | 28.997 | 1.00 | 54.19 |
| ATOM | 197 | CA  | PRO | 1483 | 4.326  | 11.021 | 26.937 | 1.00 | 54.10 |
| ATOM | 198 | CB  | PRO | 1483 | 4.772  | 12.480 | 26.976 | 1.00 | 54.25 |
| ATOM | 199 | CG  | PRO | 1483 | 3.772  | 13.118 | 27.895 | 1.00 | 55.30 |
| ATOM | 200 | C   | PRO | 1483 | 5.535  | 10.096 | 26.827 | 1.00 | 54.72 |
| ATOM | 201 | O   | PRO | 1483 | 6.343  | 10.017 | 27.751 | 1.00 | 53.48 |
| ATOM | 202 | N   | LEU | 1484 | 5.619  | 9.351  | 25.731 | 1.00 | 57.05 |
| ATOM | 204 | CA  | LEU | 1484 | 6.739  | 8.447  | 25.503 | 1.00 | 59.26 |
| ATOM | 205 | CB  | LEU | 1484 | 6.307  | 7.241  | 24.669 | 1.00 | 59.35 |
| ATOM | 206 | CG  | LEU | 1484 | 5.391  | 6.216  | 25.343 | 1.00 | 60.87 |
| ATOM | 207 | CD1 | LEU | 1484 | 4.975  | 5.161  | 24.329 | 1.00 | 57.14 |
| ATOM | 208 | CD2 | LEU | 1484 | 6.081  | 5.571  | 26.551 | 1.00 | 59.79 |
| ATOM | 209 | C   | LEU | 1484 | 7.847  | 9.194  | 24.778 | 1.00 | 61.30 |
| ATOM | 210 | O   | LEU | 1484 | 8.980  | 8.720  | 24.701 | 1.00 | 62.17 |
| ATOM | 211 | N   | GLY | 1485 | 7.494  | 10.351 | 24.220 | 1.00 | 63.75 |
| ATOM | 213 | CA  | GLY | 1485 | 8.456  | 11.173 | 23.507 | 1.00 | 66.33 |
| ATOM | 214 | C   | GLY | 1485 | 8.081  | 11.412 | 22.054 | 1.00 | 67.79 |
| ATOM | 215 | O   | GLY | 1485 | 6.918  | 11.653 | 21.727 | 1.00 | 69.61 |
| ATOM | 216 | N   | GLN | 1491 | 4.615  | 13.762 | 18.385 | 1.00 | 58.26 |
| ATOM | 218 | CA  | GLN | 1491 | 4.353  | 13.353 | 19.762 | 1.00 | 57.98 |
| ATOM | 219 | CB  | GLN | 1491 | 3.476  | 14.379 | 20.468 | 1.00 | 61.80 |
| ATOM | 220 | CG  | GLN | 1491 | 3.134  | 14.034 | 21.920 | 1.00 | 70.31 |
| ATOM | 221 | CD  | GLN | 1491 | 2.019  | 14.911 | 22.482 | 1.00 | 75.91 |
| ATOM | 222 | OE1 | GLN | 1491 | 1.355  | 15.636 | 21.748 | 1.00 | 77.85 |
| ATOM | 223 | NE2 | GLN | 1491 | 1.820  | 14.832 | 23.788 | 1.00 | 78.30 |
| ATOM | 226 | C   | GLN | 1491 | 3.709  | 11.965 | 19.881 | 1.00 | 54.67 |
| ATOM | 227 | O   | GLN | 1491 | 2.701  | 11.669 | 19.222 | 1.00 | 54.91 |
| ATOM | 228 | N   | VAL | 1492 | 4.305  | 11.125 | 20.729 | 1.00 | 50.04 |
| ATOM | 230 | CA  | VAL | 1492 | 3.825  | 9.763  | 20.988 | 1.00 | 44.93 |
| ATOM | 231 | CB  | VAL | 1492 | 4.861  | 8.705  | 20.583 | 1.00 | 42.65 |
| ATOM | 232 | CG1 | VAL | 1492 | 4.378  | 7.325  | 20.958 | 1.00 | 39.71 |
| ATOM | 233 | CG2 | VAL | 1492 | 5.119  | 8.766  | 19.099 | 1.00 | 40.98 |
| ATOM | 234 | C   | VAL | 1492 | 3.584  | 9.661  | 22.490 | 1.00 | 43.43 |
| ATOM | 235 | O   | VAL | 1492 | 4.451  | 10.029 | 23.289 | 1.00 | 43.43 |
| ATOM | 236 | N   | VAL | 1493 | 2.400  | 9.212  | 22.888 | 1.00 | 41.13 |
| ATOM | 238 | CA  | VAL | 1493 | 2.107  | 9.080  | 24.304 | 1.00 | 38.77 |
| ATOM | 239 | CB  | VAL | 1493 | 1.052  | 10.133 | 24.782 | 1.00 | 36.35 |
| ATOM | 240 | CG1 | VAL | 1493 | 1.410  | 11.508 | 24.287 | 1.00 | 36.06 |
| ATOM | 241 | CG2 | VAL | 1493 | -0.329 | 9.755  | 24.339 | 1.00 | 37.64 |
| ATOM | 242 | C   | VAL | 1493 | 1.589  | 7.693  | 24.619 | 1.00 | 37.77 |
| ATOM | 243 | O   | VAL | 1493 | 0.948  | 7.058  | 23.783 | 1.00 | 38.88 |
| ATOM | 244 | N   | LEU | 1494 | 1.949  | 7.187  | 25.790 | 1.00 | 36.24 |
| ATOM | 246 | CA  | LEU | 1494 | 1.468  | 5.880  | 26.205 | 1.00 | 35.92 |
| ATOM | 247 | CB  | LEU | 1494 | 2.252  | 5.383  | 27.429 | 1.00 | 35.41 |
| ATOM | 248 | CG  | LEU | 1494 | 1.886  | 4.009  | 28.004 | 1.00 | 36.21 |
| ATOM | 249 | CD1 | LEU | 1494 | 1.927  | 2.931  | 26.924 | 1.00 | 33.60 |
| ATOM | 250 | CD2 | LEU | 1494 | 2.835  | 3.670  | 29.145 | 1.00 | 36.03 |
| ATOM | 251 | C   | LEU | 1494 | -0.010 | 6.095  | 26.564 | 1.00 | 35.27 |
| ATOM | 252 | O   | LEU | 1494 | -0.425 | 7.215  | 26.887 | 1.00 | 34.35 |
| ATOM | 253 | N   | ALA | 1495 | -0.807 | 5.043  | 26.468 | 1.00 | 34.93 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 255 | CA  | ALA | 1495 | -2.220  | 5.145  | 26.768 | 1.00 | 34.44 |
| ATOM | 256 | CB  | ALA | 1495 | -2.955  | 5.794  | 25.616 | 1.00 | 35.29 |
| ATOM | 257 | C   | ALA | 1495 | -2.781  | 3.770  | 27.018 | 1.00 | 34.59 |
| ATOM | 258 | O   | ALA | 1495 | -2.128  | 2.766  | 26.748 | 1.00 | 35.52 |
| ATOM | 259 | N   | GLU | 1496 | -3.996  | 3.723  | 27.536 | 1.00 | 36.64 |
| ATOM | 261 | CA  | GLU | 1496 | -4.652  | 2.462  | 27.806 | 1.00 | 37.57 |
| ATOM | 262 | CB  | GLU | 1496 | -5.000  | 2.354  | 29.287 | 1.00 | 38.97 |
| ATOM | 263 | CG  | GLU | 1496 | -3.769  | 2.304  | 30.185 | 1.00 | 41.79 |
| ATOM | 264 | CD  | GLU | 1496 | -4.110  | 2.475  | 31.645 | 1.00 | 43.65 |
| ATOM | 265 | OE1 | GLU | 1496 | -4.408  | 3.617  | 32.036 | 1.00 | 42.97 |
| ATOM | 266 | OE2 | GLU | 1496 | -4.086  | 1.475  | 32.398 | 1.00 | 46.65 |
| ATOM | 267 | C   | GLU | 1496 | -5.896  | 2.404  | 26.943 | 1.00 | 38.50 |
| ATOM | 268 | O   | GLU | 1496 | -6.660  | 3.371  | 26.867 | 1.00 | 40.28 |
| ATOM | 269 | N   | ALA | 1497 | -6.051  | 1.301  | 26.223 | 1.00 | 37.34 |
| ATOM | 271 | CA  | ALA | 1497 | -7.194  | 1.131  | 25.352 | 1.00 | 37.42 |
| ATOM | 272 | CB  | ALA | 1497 | -6.743  | 0.625  | 23.985 | 1.00 | 35.92 |
| ATOM | 273 | C   | ALA | 1497 | -8.146  | 0.148  | 26.000 | 1.00 | 36.77 |
| ATOM | 274 | O   | ALA | 1497 | -7.759  | -0.977 | 26.323 | 1.00 | 35.74 |
| ATOM | 275 | N   | ILE | 1498 | -9.354  | 0.616  | 26.291 | 1.00 | 37.03 |
| ATOM | 277 | CA  | ILE | 1498 | -10.378 | -0.224 | 26.896 | 1.00 | 36.80 |
| ATOM | 278 | CB  | ILE | 1498 | -11.372 | 0.612  | 27.728 | 1.00 | 34.53 |
| ATOM | 279 | CG2 | ILE | 1498 | -12.373 | -0.290 | 28.425 | 1.00 | 34.59 |
| ATOM | 280 | CG1 | ILE | 1498 | -10.640 | 1.438  | 28.778 | 1.00 | 31.97 |
| ATOM | 281 | CD1 | ILE | 1498 | -11.552 | 2.344  | 29.541 | 1.00 | 31.12 |
| ATOM | 282 | C   | ILE | 1498 | -11.126 | -0.807 | 25.709 | 1.00 | 38.72 |
| ATOM | 283 | O   | ILE | 1498 | -11.647 | -0.066 | 24.879 | 1.00 | 37.74 |
| ATOM | 284 | N   | GLY | 1499 | -11.137 | -2.126 | 25.590 | 1.00 | 40.98 |
| ATOM | 286 | CA  | GLY | 1499 | -11.839 | -2.728 | 24.482 | 1.00 | 44.64 |
| ATOM | 287 | C   | GLY | 1499 | -10.931 | -3.115 | 23.332 | 1.00 | 48.45 |
| ATOM | 288 | O   | GLY | 1499 | -10.260 | -4.147 | 23.401 | 1.00 | 51.92 |
| ATOM | 289 | N   | LEU | 1500 | -10.877 | -2.269 | 22.303 | 1.00 | 47.87 |
| ATOM | 291 | CA  | LEU | 1500 | -10.076 | -2.530 | 21.102 | 1.00 | 46.80 |
| ATOM | 292 | CB  | LEU | 1500 | -8.594  | -2.770 | 21.434 | 1.00 | 45.37 |
| ATOM | 293 | CG  | LEU | 1500 | -7.543  | -1.661 | 21.293 | 1.00 | 44.84 |
| ATOM | 294 | CD1 | LEU | 1500 | -6.174  | -2.290 | 21.450 | 1.00 | 43.33 |
| ATOM | 295 | CD2 | LEU | 1500 | -7.623  | -0.959 | 19.948 | 1.00 | 40.43 |
| ATOM | 296 | C   | LEU | 1500 | -10.631 | -3.737 | 20.349 | 1.00 | 45.63 |
| ATOM | 297 | O   | LEU | 1500 | -10.797 | -4.823 | 20.915 | 1.00 | 44.42 |
| ATOM | 298 | N   | PRO | 1505 | -13.569 | -5.910 | 25.549 | 1.00 | 52.13 |
| ATOM | 299 | CD  | PRO | 1505 | -14.316 | -7.170 | 25.398 | 1.00 | 54.09 |
| ATOM | 300 | CA  | PRO | 1505 | -14.451 | -4.828 | 25.999 | 1.00 | 50.46 |
| ATOM | 301 | CB  | PRO | 1505 | -15.841 | -5.455 | 25.891 | 1.00 | 49.86 |
| ATOM | 302 | CG  | PRO | 1505 | -15.586 | -6.898 | 26.193 | 1.00 | 52.17 |
| ATOM | 303 | C   | PRO | 1505 | -14.136 | -4.370 | 27.422 | 1.00 | 47.75 |
| ATOM | 304 | O   | PRO | 1505 | -14.148 | -3.180 | 27.710 | 1.00 | 47.93 |
| ATOM | 305 | N   | ASN | 1506 | -13.778 | -5.313 | 28.285 | 1.00 | 46.20 |
| ATOM | 307 | CA  | ASN | 1506 | -13.458 | -4.986 | 29.666 | 1.00 | 49.52 |
| ATOM | 308 | CB  | ASN | 1506 | -14.310 | -5.829 | 30.612 | 1.00 | 52.42 |
| ATOM | 309 | CG  | ASN | 1506 | -15.788 | -5.489 | 30.526 | 1.00 | 54.50 |
| ATOM | 310 | OD1 | ASN | 1506 | -16.179 | -4.331 | 30.680 | 1.00 | 57.16 |
| ATOM | 311 | ND2 | ASN | 1506 | -16.610 | -6.489 | 30.244 | 1.00 | 56.82 |
| ATOM | 314 | C   | ASN | 1506 | -11.973 | -5.124 | 30.003 | 1.00 | 50.65 |
| ATOM | 315 | O   | ASN | 1506 | -11.583 | -5.174 | 31.178 | 1.00 | 50.65 |
| ATOM | 316 | N   | ARG | 1507 | -11.142 | -5.145 | 28.968 | 1.00 | 50.90 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 318 | CA  | ARG | 1507 | -9.700 | -5.276  | 29.127 | 1.00 | 49.77 |
| ATOM | 319 | CB  | ARG | 1507 | -9.192 | -6.483  | 28.339 | 1.00 | 55.81 |
| ATOM | 320 | CG  | ARG | 1507 | -9.450 | -7.833  | 28.988 | 1.00 | 61.63 |
| ATOM | 321 | CD  | ARG | 1507 | -8.408 | -8.149  | 30.041 | 1.00 | 66.01 |
| ATOM | 322 | NE  | ARG | 1507 | -8.600 | -9.490  | 30.583 | 1.00 | 72.55 |
| ATOM | 324 | CZ  | ARG | 1507 | -8.024 | -9.944  | 31.694 | 1.00 | 77.32 |
| ATOM | 325 | NH1 | ARG | 1507 | -7.198 | -9.169  | 32.392 | 1.00 | 78.41 |
| ATOM | 328 | NH2 | ARG | 1507 | -8.335 | -11.151 | 32.147 | 1.00 | 79.30 |
| ATOM | 331 | C   | ARG | 1507 | -9.015 | -4.036  | 28.595 | 1.00 | 45.60 |
| ATOM | 332 | O   | ARG | 1507 | -9.452 | -3.464  | 27.590 | 1.00 | 42.08 |
| ATOM | 333 | N   | VAL | 1508 | -7.977 | -3.597  | 29.297 | 1.00 | 42.86 |
| ATOM | 335 | CA  | VAL | 1508 | -7.216 | -2.443  | 28.858 | 1.00 | 40.75 |
| ATOM | 336 | CB  | VAL | 1508 | -6.903 | -1.428  | 30.010 | 1.00 | 38.75 |
| ATOM | 337 | CG1 | VAL | 1508 | -8.184 | -1.015  | 30.702 | 1.00 | 43.29 |
| ATOM | 338 | CG2 | VAL | 1508 | -5.919 | -2.005  | 31.012 | 1.00 | 37.56 |
| ATOM | 339 | C   | VAL | 1508 | -5.929 | -2.970  | 28.248 | 1.00 | 39.14 |
| ATOM | 340 | O   | VAL | 1508 | -5.369 | -3.972  | 28.708 | 1.00 | 39.16 |
| ATOM | 341 | N   | THR | 1509 | -5.517 | -2.345  | 27.157 | 1.00 | 37.26 |
| ATOM | 343 | CA  | THR | 1509 | -4.298 | -2.737  | 26.486 | 1.00 | 36.52 |
| ATOM | 344 | CB  | THR | 1509 | -4.571 | -3.187  | 25.019 | 1.00 | 37.83 |
| ATOM | 345 | OG1 | THR | 1509 | -5.423 | -4.340  | 25.011 | 1.00 | 43.88 |
| ATOM | 347 | CG2 | THR | 1509 | -3.267 | -3.540  | 24.310 | 1.00 | 34.51 |
| ATOM | 348 | C   | THR | 1509 | -3.434 | -1.495  | 26.473 | 1.00 | 35.82 |
| ATOM | 349 | O   | THR | 1509 | -3.927 | -0.408  | 26.174 | 1.00 | 34.37 |
| ATOM | 350 | N   | LYS | 1510 | -2.175 | -1.628  | 26.880 | 1.00 | 35.96 |
| ATOM | 352 | CA  | LYS | 1510 | -1.291 | -0.479  | 26.843 | 1.00 | 36.13 |
| ATOM | 353 | CB  | LYS | 1510 | -0.032 | -0.695  | 27.680 | 1.00 | 37.77 |
| ATOM | 354 | CG  | LYS | 1510 | -0.277 | -0.854  | 29.162 | 1.00 | 44.58 |
| ATOM | 355 | CD  | LYS | 1510 | 1.023  | -0.658  | 29.948 | 1.00 | 51.33 |
| ATOM | 356 | CE  | LYS | 1510 | 0.947  | -1.286  | 31.342 | 1.00 | 58.15 |
| ATOM | 357 | NZ  | LYS | 1510 | -0.149 | -0.728  | 32.187 | 1.00 | 64.94 |
| ATOM | 361 | C   | LYS | 1510 | -0.929 | -0.355  | 25.373 | 1.00 | 34.59 |
| ATOM | 362 | O   | LYS | 1510 | -0.574 | -1.345  | 24.734 | 1.00 | 31.43 |
| ATOM | 363 | N   | VAL | 1511 | -1.092 | 0.846   | 24.835 | 1.00 | 32.95 |
| ATOM | 365 | CA  | VAL | 1511 | -0.810 | 1.121   | 23.441 | 1.00 | 32.29 |
| ATOM | 366 | CB  | VAL | 1511 | -2.129 | 1.213   | 22.621 | 1.00 | 32.95 |
| ATOM | 367 | CG1 | VAL | 1511 | -2.879 | -0.109  | 22.686 | 1.00 | 34.79 |
| ATOM | 368 | CG2 | VAL | 1511 | -3.026 | 2.354   | 23.148 | 1.00 | 32.84 |
| ATOM | 369 | C   | VAL | 1511 | -0.058 | 2.446   | 23.353 | 1.00 | 32.65 |
| ATOM | 370 | O   | VAL | 1511 | 0.021  | 3.185   | 24.344 | 1.00 | 31.62 |
| ATOM | 371 | N   | ALA | 1512 | 0.521  | 2.721   | 22.186 | 1.00 | 30.24 |
| ATOM | 373 | CA  | ALA | 1512 | 1.244  | 3.969   | 21.954 | 1.00 | 28.18 |
| ATOM | 374 | CB  | ALA | 1512 | 2.599  | 3.700   | 21.316 | 1.00 | 25.62 |
| ATOM | 375 | C   | ALA | 1512 | 0.373  | 4.783   | 21.015 | 1.00 | 27.54 |
| ATOM | 376 | O   | ALA | 1512 | -0.151 | 4.264   | 20.040 | 1.00 | 27.17 |
| ATOM | 377 | N   | VAL | 1513 | 0.204  | 6.054   | 21.322 | 1.00 | 30.52 |
| ATOM | 379 | CA  | VAL | 1513 | -0.630 | 6.914   | 20.503 | 1.00 | 34.08 |
| ATOM | 380 | CB  | VAL | 1513 | -1.731 | 7.591   | 21.347 | 1.00 | 34.61 |
| ATOM | 381 | CG1 | VAL | 1513 | -2.607 | 8.444   | 20.474 | 1.00 | 36.75 |
| ATOM | 382 | CG2 | VAL | 1513 | -2.567 | 6.549   | 22.087 | 1.00 | 33.45 |
| ATOM | 383 | C   | VAL | 1513 | 0.203  | 8.008   | 19.837 | 1.00 | 36.38 |
| ATOM | 384 | O   | VAL | 1513 | 0.924  | 8.750   | 20.510 | 1.00 | 35.32 |
| ATOM | 385 | N   | LYS | 1514 | 0.105  | 8.093   | 18.513 | 1.00 | 38.19 |
| ATOM | 387 | CA  | LYS | 1514 | 0.818  | 9.104   | 17.746 | 1.00 | 40.12 |



|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 388 | CB  | LYS | 1514 | 1.339  | 8.513  | 16.439 | 1.00 | 40.93 |
| ATOM | 389 | CG  | LYS | 1514 | 2.452  | 7.488  | 16.632 | 1.00 | 42.52 |
| ATOM | 390 | CD  | LYS | 1514 | 2.861  | 6.803  | 15.338 | 1.00 | 46.25 |
| ATOM | 391 | CE  | LYS | 1514 | 3.268  | 7.796  | 14.261 | 1.00 | 49.76 |
| ATOM | 392 | NZ  | LYS | 1514 | 4.304  | 8.771  | 14.705 | 1.00 | 52.14 |
| ATOM | 396 | C   | LYS | 1514 | -0.166 | 10.215 | 17.458 | 1.00 | 40.69 |
| ATOM | 397 | O   | LYS | 1514 | -1.313 | 9.953  | 17.110 | 1.00 | 41.69 |
| ATOM | 398 | N   | MET | 1515 | 0.277  | 11.454 | 17.613 | 1.00 | 43.28 |
| ATOM | 400 | CA  | MET | 1515 | -0.569 | 12.610 | 17.379 | 1.00 | 46.21 |
| ATOM | 401 | CB  | MET | 1515 | -1.363 | 12.936 | 18.644 | 1.00 | 46.96 |
| ATOM | 402 | CG  | MET | 1515 | -0.488 | 13.293 | 19.837 | 1.00 | 47.61 |
| ATOM | 403 | SD  | MET | 1515 | -1.413 | 13.464 | 21.358 | 1.00 | 49.77 |
| ATOM | 404 | CE  | MET | 1515 | -1.593 | 11.761 | 21.814 | 1.00 | 47.84 |
| ATOM | 405 | C   | MET | 1515 | 0.299  | 13.805 | 17.000 | 1.00 | 49.90 |
| ATOM | 406 | O   | MET | 1515 | 1.519  | 13.788 | 17.194 | 1.00 | 49.83 |
| ATOM | 407 | N   | LEU | 1516 | -0.339 | 14.822 | 16.430 | 1.00 | 54.45 |
| ATOM | 409 | CA  | LEU | 1516 | 0.335  | 16.053 | 16.023 | 1.00 | 57.57 |
| ATOM | 410 | CB  | LEU | 1516 | -0.483 | 16.762 | 14.944 | 1.00 | 54.10 |
| ATOM | 411 | CG  | LEU | 1516 | -0.800 | 16.007 | 13.664 | 1.00 | 50.71 |
| ATOM | 412 | CD1 | LEU | 1516 | -1.830 | 16.800 | 12.901 | 1.00 | 51.20 |
| ATOM | 413 | CD2 | LEU | 1516 | 0.467  | 15.809 | 12.849 | 1.00 | 50.08 |
| ATOM | 414 | C   | LEU | 1516 | 0.487  | 17.010 | 17.202 | 1.00 | 61.88 |
| ATOM | 415 | O   | LEU | 1516 | -0.170 | 16.852 | 18.235 | 1.00 | 63.30 |
| ATOM | 416 | N   | LYS | 1517 | 1.335  | 18.018 | 17.021 | 1.00 | 66.83 |
| ATOM | 418 | CA  | LYS | 1517 | 1.568  | 19.036 | 18.037 | 1.00 | 71.46 |
| ATOM | 419 | CB  | LYS | 1517 | 2.985  | 19.593 | 17.911 | 1.00 | 76.28 |
| ATOM | 420 | CG  | LYS | 1517 | 4.084  | 18.626 | 18.349 | 1.00 | 82.19 |
| ATOM | 421 | CD  | LYS | 1517 | 5.450  | 19.085 | 17.846 | 1.00 | 86.93 |
| ATOM | 422 | CE  | LYS | 1517 | 6.579  | 18.228 | 18.411 | 1.00 | 90.46 |
| ATOM | 423 | NZ  | LYS | 1517 | 7.896  | 18.513 | 17.763 | 1.00 | 92.51 |
| ATOM | 427 | C   | LYS | 1517 | 0.549  | 20.156 | 17.837 | 1.00 | 72.44 |
| ATOM | 428 | O   | LYS | 1517 | -0.142 | 20.198 | 16.819 | 1.00 | 72.12 |
| ATOM | 429 | N   | SER | 1518 | 0.474  | 21.075 | 18.793 | 1.00 | 73.90 |
| ATOM | 431 | CA  | SER | 1518 | -0.470 | 22.185 | 18.697 | 1.00 | 74.96 |
| ATOM | 432 | CB  | SER | 1518 | -0.498 | 22.980 | 20.002 | 1.00 | 74.72 |
| ATOM | 433 | C   | SER | 1518 | -0.133 | 23.100 | 17.525 | 1.00 | 76.16 |
| ATOM | 434 | O   | SER | 1518 | -1.029 | 23.667 | 16.897 | 1.00 | 76.56 |
| ATOM | 435 | N   | ASP | 1519 | 1.158  | 23.245 | 17.232 | 1.00 | 77.24 |
| ATOM | 437 | CA  | ASP | 1519 | 1.601  | 24.094 | 16.125 | 1.00 | 78.51 |
| ATOM | 438 | CB  | ASP | 1519 | 2.849  | 24.888 | 16.535 | 1.00 | 79.70 |
| ATOM | 439 | C   | ASP | 1519 | 1.887  | 23.264 | 14.865 | 1.00 | 78.29 |
| ATOM | 440 | O   | ASP | 1519 | 2.797  | 23.580 | 14.088 | 1.00 | 78.52 |
| ATOM | 441 | N   | ALA | 1520 | 1.121  | 22.192 | 14.682 | 1.00 | 76.90 |
| ATOM | 443 | CA  | ALA | 1520 | 1.285  | 21.313 | 13.529 | 1.00 | 74.09 |
| ATOM | 444 | CB  | ALA | 1520 | 0.737  | 19.930 | 13.840 | 1.00 | 74.20 |
| ATOM | 445 | C   | ALA | 1520 | 0.580  | 21.895 | 12.318 | 1.00 | 71.82 |
| ATOM | 446 | O   | ALA | 1520 | -0.573 | 22.311 | 12.400 | 1.00 | 71.78 |
| ATOM | 447 | N   | THR | 1521 | 1.291  | 21.951 | 11.202 | 1.00 | 69.97 |
| ATOM | 449 | CA  | THR | 1521 | 0.734  | 22.480 | 9.970  | 1.00 | 68.86 |
| ATOM | 450 | CB  | THR | 1521 | 1.848  | 22.911 | 9.026  | 1.00 | 68.87 |
| ATOM | 451 | OG1 | THR | 1521 | 2.621  | 21.762 | 8.651  | 1.00 | 70.03 |
| ATOM | 453 | CG2 | THR | 1521 | 2.756  | 23.912 | 9.715  | 1.00 | 71.55 |
| ATOM | 454 | C   | THR | 1521 | -0.081 | 21.389 | 9.292  | 1.00 | 67.89 |
| ATOM | 455 | O   | THR | 1521 | 0.111  | 20.204 | 9.563  | 1.00 | 69.03 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 456 | N   | GLU | 1522 | -0.964 | 21.783 | 8.382  | 1.00 | 66.59 |
| ATOM | 458 | CA  | GLU | 1522 | -1.785 | 20.821 | 7.657  | 1.00 | 65.71 |
| ATOM | 459 | CB  | GLU | 1522 | -2.737 | 21.532 | 6.692  | 1.00 | 65.61 |
| ATOM | 460 | C   | GLU | 1522 | -0.886 | 19.823 | 6.909  | 1.00 | 64.32 |
| ATOM | 461 | O   | GLU | 1522 | -1.324 | 18.729 | 6.549  | 1.00 | 66.29 |
| ATOM | 462 | N   | LYS | 1523 | 0.367  | 20.205 | 6.677  | 1.00 | 59.93 |
| ATOM | 464 | CA  | LYS | 1523 | 1.314  | 19.326 | 6.016  | 1.00 | 57.38 |
| ATOM | 465 | CB  | LYS | 1523 | 2.629  | 20.064 | 5.747  | 1.00 | 60.47 |
| ATOM | 466 | CG  | LYS | 1523 | 3.815  | 19.162 | 5.370  | 1.00 | 62.75 |
| ATOM | 467 | CD  | LYS | 1523 | 3.510  | 18.288 | 4.160  | 1.00 | 63.95 |
| ATOM | 468 | CE  | LYS | 1523 | 4.759  | 17.596 | 3.652  | 1.00 | 65.88 |
| ATOM | 469 | NZ  | LYS | 1523 | 4.429  | 16.721 | 2.494  | 1.00 | 70.37 |
| ATOM | 473 | C   | LYS | 1523 | 1.565  | 18.173 | 6.974  | 1.00 | 54.80 |
| ATOM | 474 | O   | LYS | 1523 | 1.548  | 17.003 | 6.581  | 1.00 | 54.44 |
| ATOM | 475 | N   | ASP | 1524 | 1.786  | 18.523 | 8.239  | 1.00 | 51.67 |
| ATOM | 477 | CA  | ASP | 1524 | 2.036  | 17.549 | 9.295  | 1.00 | 49.43 |
| ATOM | 478 | CB  | ASP | 1524 | 2.297  | 18.271 | 10.622 | 1.00 | 51.06 |
| ATOM | 479 | CG  | ASP | 1524 | 3.598  | 19.080 | 10.613 | 1.00 | 54.03 |
| ATOM | 480 | OD1 | ASP | 1524 | 3.649  | 20.136 | 11.283 | 1.00 | 56.32 |
| ATOM | 481 | OD2 | ASP | 1524 | 4.580  | 18.658 | 9.956  | 1.00 | 56.02 |
| ATOM | 482 | C   | ASP | 1524 | 0.847  | 16.596 | 9.413  | 1.00 | 47.73 |
| ATOM | 483 | O   | ASP | 1524 | 1.017  | 15.387 | 9.580  | 1.00 | 45.85 |
| ATOM | 484 | N   | LEU | 1525 | -0.354 | 17.155 | 9.300  | 1.00 | 47.62 |
| ATOM | 486 | CA  | LEU | 1525 | -1.585 | 16.380 | 9.354  | 1.00 | 45.95 |
| ATOM | 487 | CB  | LEU | 1525 | -2.801 | 17.307 | 9.271  | 1.00 | 43.61 |
| ATOM | 488 | CG  | LEU | 1525 | -4.193 | 16.665 | 9.234  | 1.00 | 44.56 |
| ATOM | 489 | CD1 | LEU | 1525 | -4.364 | 15.543 | 10.268 | 1.00 | 46.02 |
| ATOM | 490 | CD2 | LEU | 1525 | -5.215 | 17.740 | 9.468  | 1.00 | 43.80 |
| ATOM | 491 | C   | LEU | 1525 | -1.605 | 15.372 | 8.210  | 1.00 | 45.67 |
| ATOM | 492 | O   | LEU | 1525 | -1.921 | 14.204 | 8.416  | 1.00 | 46.78 |
| ATOM | 493 | N   | SER | 1526 | -1.245 | 15.822 | 7.014  | 1.00 | 45.44 |
| ATOM | 495 | CA  | SER | 1526 | -1.211 | 14.945 | 5.851  | 1.00 | 46.33 |
| ATOM | 496 | CB  | SER | 1526 | -0.903 | 15.744 | 4.584  | 1.00 | 48.48 |
| ATOM | 497 | OG  | SER | 1526 | -2.012 | 16.546 | 4.218  | 1.00 | 57.28 |
| ATOM | 499 | C   | SER | 1526 | -0.192 | 13.821 | 5.995  | 1.00 | 43.84 |
| ATOM | 500 | O   | SER | 1526 | -0.480 | 12.669 | 5.674  | 1.00 | 45.24 |
| ATOM | 501 | N   | ASP | 1527 | 0.994  | 14.144 | 6.489  | 1.00 | 40.88 |
| ATOM | 503 | CA  | ASP | 1527 | 2.024  | 13.128 | 6.646  | 1.00 | 39.70 |
| ATOM | 504 | CB  | ASP | 1527 | 3.376  | 13.767 | 6.960  | 1.00 | 37.62 |
| ATOM | 505 | CG  | ASP | 1527 | 3.934  | 14.555 | 5.786  | 1.00 | 37.01 |
| ATOM | 506 | OD1 | ASP | 1527 | 3.399  | 14.434 | 4.657  | 1.00 | 35.78 |
| ATOM | 507 | OD2 | ASP | 1527 | 4.916  | 15.295 | 5.992  | 1.00 | 40.23 |
| ATOM | 508 | C   | ASP | 1527 | 1.652  | 12.053 | 7.659  | 1.00 | 38.51 |
| ATOM | 509 | O   | ASP | 1527 | 1.951  | 10.872 | 7.461  | 1.00 | 37.68 |
| ATOM | 510 | N   | LEU | 1528 | 0.973  | 12.460 | 8.725  | 1.00 | 38.16 |
| ATOM | 512 | CA  | LEU | 1528 | 0.532  | 11.513 | 9.744  | 1.00 | 38.29 |
| ATOM | 513 | CB  | LEU | 1528 | 0.026  | 12.258 | 10.985 | 1.00 | 37.12 |
| ATOM | 514 | CG  | LEU | 1528 | -0.505 | 11.412 | 12.153 | 1.00 | 39.03 |
| ATOM | 515 | CD1 | LEU | 1528 | 0.499  | 10.323 | 12.539 | 1.00 | 35.39 |
| ATOM | 516 | CD2 | LEU | 1528 | -0.825 | 12.315 | 13.334 | 1.00 | 35.29 |
| ATOM | 517 | C   | LEU | 1528 | -0.568 | 10.611 | 9.155  | 1.00 | 38.10 |
| ATOM | 518 | O   | LEU | 1528 | -0.607 | 9.400  | 9.413  | 1.00 | 37.21 |
| ATOM | 519 | N   | ILE | 1529 | -1.450 | 11.210 | 8.355  | 1.00 | 36.71 |
| ATOM | 521 | CA  | ILE | 1529 | -2.531 | 10.472 | 7.718  | 1.00 | 35.93 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 522 | CB  | ILE | 1529 | -3.486 | 11.419 | 6.931  | 1.00 | 35.67 |
| ATOM | 523 | CG2 | ILE | 1529 | -4.492 | 10.619 | 6.119  | 1.00 | 34.04 |
| ATOM | 524 | CG1 | ILE | 1529 | -4.259 | 12.295 | 7.916  | 1.00 | 33.81 |
| ATOM | 525 | CD1 | ILE | 1529 | -5.177 | 13.288 | 7.276  | 1.00 | 33.58 |
| ATOM | 526 | C   | ILE | 1529 | -1.912 | 9.447  | 6.786  | 1.00 | 37.49 |
| ATOM | 527 | O   | ILE | 1529 | -2.274 | 8.269  | 6.829  | 1.00 | 37.11 |
| ATOM | 528 | N   | SER | 1530 | -0.926 | 9.893  | 6.003  | 1.00 | 38.20 |
| ATOM | 530 | CA  | SER | 1530 | -0.217 | 9.036  | 5.050  | 1.00 | 37.49 |
| ATOM | 531 | CB  | SER | 1530 | 0.911  | 9.822  | 4.370  | 1.00 | 43.32 |
| ATOM | 532 | OG  | SER | 1530 | 0.424  | 10.970 | 3.687  | 1.00 | 52.31 |
| ATOM | 534 | C   | SER | 1530 | 0.382  | 7.808  | 5.719  | 1.00 | 34.40 |
| ATOM | 535 | O   | SER | 1530 | 0.234  | 6.691  | 5.219  | 1.00 | 31.51 |
| ATOM | 536 | N   | GLU | 1531 | 1.048  | 8.028  | 6.851  | 1.00 | 32.08 |
| ATOM | 538 | CA  | GLU | 1531 | 1.690  | 6.952  | 7.594  | 1.00 | 30.60 |
| ATOM | 539 | CB  | GLU | 1531 | 2.506  | 7.515  | 8.759  | 1.00 | 29.70 |
| ATOM | 540 | CG  | GLU | 1531 | 3.094  | 6.428  | 9.657  | 1.00 | 30.53 |
| ATOM | 541 | CD  | GLU | 1531 | 3.871  | 6.962  | 10.839 | 1.00 | 33.17 |
| ATOM | 542 | OE1 | GLU | 1531 | 4.473  | 6.134  | 11.552 | 1.00 | 33.38 |
| ATOM | 543 | OE2 | GLU | 1531 | 3.883  | 8.193  | 11.062 | 1.00 | 37.52 |
| ATOM | 544 | C   | GLU | 1531 | 0.698  | 5.911  | 8.094  | 1.00 | 30.17 |
| ATOM | 545 | O   | GLU | 1531 | 0.991  | 4.714  | 8.100  | 1.00 | 29.76 |
| ATOM | 546 | N   | MET | 1532 | -0.464 | 6.379  | 8.530  | 1.00 | 31.34 |
| ATOM | 548 | CA  | MET | 1532 | -1.521 | 5.496  | 9.015  | 1.00 | 30.72 |
| ATOM | 549 | CB  | MET | 1532 | -2.666 | 6.336  | 9.591  | 1.00 | 29.99 |
| ATOM | 550 | CG  | MET | 1532 | -3.880 | 5.523  | 10.020 | 1.00 | 30.10 |
| ATOM | 551 | SD  | MET | 1532 | -5.173 | 6.510  | 10.727 | 1.00 | 29.46 |
| ATOM | 552 | CE  | MET | 1532 | -5.462 | 7.682  | 9.455  | 1.00 | 23.76 |
| ATOM | 553 | C   | MET | 1532 | -2.025 | 4.638  | 7.843  | 1.00 | 30.47 |
| ATOM | 554 | O   | MET | 1532 | -2.080 | 3.401  | 7.925  | 1.00 | 27.05 |
| ATOM | 555 | N   | GLU | 1533 | -2.387 | 5.319  | 6.756  | 1.00 | 30.56 |
| ATOM | 557 | CA  | GLU | 1533 | -2.863 | 4.674  | 5.542  | 1.00 | 30.56 |
| ATOM | 558 | CB  | GLU | 1533 | -3.090 | 5.725  | 4.458  | 1.00 | 28.60 |
| ATOM | 559 | CG  | GLU | 1533 | -4.226 | 6.677  | 4.761  | 1.00 | 29.08 |
| ATOM | 560 | CD  | GLU | 1533 | -5.531 | 5.954  | 5.014  | 1.00 | 31.28 |
| ATOM | 561 | OE1 | GLU | 1533 | -6.006 | 5.230  | 4.117  | 1.00 | 33.09 |
| ATOM | 562 | OE2 | GLU | 1533 | -6.086 | 6.104  | 6.121  | 1.00 | 34.97 |
| ATOM | 563 | C   | GLU | 1533 | -1.861 | 3.638  | 5.064  | 1.00 | 29.86 |
| ATOM | 564 | O   | GLU | 1533 | -2.232 | 2.541  | 4.677  | 1.00 | 32.28 |
| ATOM | 565 | N   | MET | 1534 | -0.590 | 4.014  | 5.107  | 1.00 | 32.54 |
| ATOM | 567 | CA  | MET | 1534 | 0.515  | 3.145  | 4.719  | 1.00 | 33.39 |
| ATOM | 568 | CB  | MET | 1534 | 1.826  | 3.894  | 4.885  | 1.00 | 34.70 |
| ATOM | 569 | CG  | MET | 1534 | 3.038  | 3.047  | 4.654  | 1.00 | 44.51 |
| ATOM | 570 | SD  | MET | 1534 | 3.479  | 3.063  | 2.943  | 1.00 | 52.81 |
| ATOM | 571 | CE  | MET | 1534 | 4.349  | 4.607  | 2.874  | 1.00 | 47.34 |
| ATOM | 572 | C   | MET | 1534 | 0.530  | 1.896  | 5.607  | 1.00 | 32.98 |
| ATOM | 573 | O   | MET | 1534 | 0.689  | 0.776  | 5.115  | 1.00 | 34.00 |
| ATOM | 574 | N   | MET | 1535 | 0.364  | 2.100  | 6.910  | 1.00 | 31.92 |
| ATOM | 576 | CA  | MET | 1535 | 0.336  | 0.986  | 7.848  | 1.00 | 30.80 |
| ATOM | 577 | CB  | MET | 1535 | 0.252  | 1.503  | 9.294  | 1.00 | 33.77 |
| ATOM | 578 | CG  | MET | 1535 | 1.509  | 2.216  | 9.810  | 1.00 | 32.26 |
| ATOM | 579 | SD  | MET | 1535 | 1.520  | 2.433  | 11.617 | 1.00 | 34.75 |
| ATOM | 580 | CE  | MET | 1535 | 1.183  | 4.173  | 11.723 | 1.00 | 37.86 |
| ATOM | 581 | C   | MET | 1535 | -0.837 | 0.052  | 7.521  | 1.00 | 30.80 |
| ATOM | 582 | O   | MET | 1535 | -0.704 | -1.175 | 7.589  | 1.00 | 32.03 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 583 | N   | LYS | 1536 | -1.974 | 0.638   | 7.142  | 1.00 | 31.04 |
| ATOM | 585 | CA  | LYS | 1536 | -3.170 | -0.123  | 6.767  | 1.00 | 31.15 |
| ATOM | 586 | CB  | LYS | 1536 | -4.334 | 0.808   | 6.415  | 1.00 | 31.21 |
| ATOM | 587 | CG  | LYS | 1536 | -4.864 | 1.625   | 7.552  | 1.00 | 27.76 |
| ATOM | 588 | CD  | LYS | 1536 | -5.973 | 2.540   | 7.103  | 1.00 | 21.44 |
| ATOM | 589 | CE  | LYS | 1536 | -6.434 | 3.401   | 8.248  | 1.00 | 24.69 |
| ATOM | 590 | NZ  | LYS | 1536 | -7.578 | 4.241   | 7.868  | 1.00 | 25.84 |
| ATOM | 594 | C   | LYS | 1536 | -2.887 | -1.003  | 5.561  | 1.00 | 30.71 |
| ATOM | 595 | O   | LYS | 1536 | -3.238 | -2.175  | 5.560  | 1.00 | 34.73 |
| ATOM | 596 | N   | MET | 1537 | -2.309 | -0.412  | 4.523  | 1.00 | 31.18 |
| ATOM | 598 | CA  | MET | 1537 | -1.967 | -1.148  | 3.307  | 1.00 | 31.53 |
| ATOM | 599 | CB  | MET | 1537 | -1.370 | -0.200  | 2.267  | 1.00 | 35.11 |
| ATOM | 600 | CG  | MET | 1537 | -2.377 | 0.780   | 1.654  | 1.00 | 42.40 |
| ATOM | 601 | SD  | MET | 1537 | -3.657 | -0.051  | 0.685  | 1.00 | 50.10 |
| ATOM | 602 | CE  | MET | 1537 | -3.069 | 0.266   | -0.972 | 1.00 | 50.20 |
| ATOM | 603 | C   | MET | 1537 | -0.976 | -2.276  | 3.572  | 1.00 | 30.86 |
| ATOM | 604 | O   | MET | 1537 | -1.218 | -3.425  | 3.210  | 1.00 | 30.07 |
| ATOM | 605 | N   | ILE | 1538 | 0.119  | -1.950  | 4.259  | 1.00 | 30.92 |
| ATOM | 607 | CA  | ILE | 1538 | 1.173  | -2.923  | 4.563  | 1.00 | 28.12 |
| ATOM | 608 | CB  | ILE | 1538 | 2.359  | -2.254  | 5.313  | 1.00 | 28.71 |
| ATOM | 609 | CG2 | ILE | 1538 | 3.310  | -3.303  | 5.865  | 1.00 | 29.72 |
| ATOM | 610 | CG1 | ILE | 1538 | 3.126  | -1.343  | 4.350  | 1.00 | 30.79 |
| ATOM | 611 | CD1 | ILE | 1538 | 4.375  | -0.745  | 4.945  | 1.00 | 32.46 |
| ATOM | 612 | C   | ILE | 1538 | 0.717  | -4.179  | 5.299  | 1.00 | 26.33 |
| ATOM | 613 | O   | ILE | 1538 | 1.178  | -5.276  | 4.996  | 1.00 | 24.20 |
| ATOM | 614 | N   | GLY | 1539 | -0.188 | -4.027  | 6.258  | 1.00 | 27.41 |
| ATOM | 616 | CA  | GLY | 1539 | -0.651 | -5.190  | 6.997  | 1.00 | 27.83 |
| ATOM | 617 | C   | GLY | 1539 | 0.240  | -5.533  | 8.179  | 1.00 | 29.10 |
| ATOM | 618 | O   | GLY | 1539 | 1.308  | -4.937  | 8.368  | 1.00 | 30.33 |
| ATOM | 619 | N   | LYS | 1540 | -0.157 | -6.561  | 8.916  | 1.00 | 29.46 |
| ATOM | 621 | CA  | LYS | 1540 | 0.539  | -6.976  | 10.120 | 1.00 | 29.27 |
| ATOM | 622 | CB  | LYS | 1540 | -0.470 | -7.520  | 11.139 | 1.00 | 27.01 |
| ATOM | 623 | CG  | LYS | 1540 | -1.438 | -6.483  | 11.638 | 1.00 | 29.58 |
| ATOM | 624 | CD  | LYS | 1540 | -2.496 | -7.103  | 12.530 | 1.00 | 39.41 |
| ATOM | 625 | CE  | LYS | 1540 | -3.548 | -6.069  | 12.952 | 1.00 | 44.14 |
| ATOM | 626 | NZ  | LYS | 1540 | -2.994 | -4.996  | 13.828 | 1.00 | 46.92 |
| ATOM | 630 | C   | LYS | 1540 | 1.679  | -7.962  | 10.020 | 1.00 | 27.17 |
| ATOM | 631 | O   | LYS | 1540 | 1.745  | -8.794  | 9.111  | 1.00 | 26.20 |
| ATOM | 632 | N   | HIS | 1541 | 2.565  | -7.856  | 11.006 | 1.00 | 26.96 |
| ATOM | 634 | CA  | HIS | 1541 | 3.690  | -8.761  | 11.144 | 1.00 | 27.30 |
| ATOM | 635 | CB  | HIS | 1541 | 4.787  | -8.506  | 10.120 | 1.00 | 22.20 |
| ATOM | 636 | CG  | HIS | 1541 | 5.849  | -9.555  | 10.125 | 1.00 | 21.32 |
| ATOM | 637 | CD2 | HIS | 1541 | 5.886  | -10.789 | 9.555  | 1.00 | 23.29 |
| ATOM | 638 | ND1 | HIS | 1541 | 7.052  | -9.413  | 10.791 | 1.00 | 19.41 |
| ATOM | 640 | CE1 | HIS | 1541 | 7.775  | -10.509 | 10.633 | 1.00 | 23.61 |
| ATOM | 641 | NE2 | HIS | 1541 | 7.097  | -11.355 | 9.889  | 1.00 | 21.81 |
| ATOM | 643 | C   | HIS | 1541 | 4.245  | -8.640  | 12.565 | 1.00 | 28.64 |
| ATOM | 644 | O   | HIS | 1541 | 4.290  | -7.549  | 13.132 | 1.00 | 30.64 |
| ATOM | 645 | N   | LYS | 1542 | 4.650  | -9.791  | 13.108 | 1.00 | 29.47 |
| ATOM | 647 | CA  | LYS | 1542 | 5.200  | -9.893  | 14.457 | 1.00 | 28.78 |
| ATOM | 648 | CB  | LYS | 1542 | 5.683  | -11.326 | 14.714 | 1.00 | 30.16 |
| ATOM | 649 | CG  | LYS | 1542 | 6.232  | -11.572 | 16.112 | 1.00 | 32.63 |
| ATOM | 650 | CD  | LYS | 1542 | 5.277  | -11.046 | 17.155 | 1.00 | 42.90 |
| ATOM | 651 | CE  | LYS | 1542 | 5.659  | -11.475 | 18.551 | 1.00 | 48.13 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 652 | NZ  | LYS | 1542 | 4.726  | -10.930 | 19.564 | 1.00 | 54.87 |
| ATOM | 656 | C   | LYS | 1542 | 6.351  | -8.928  | 14.705 | 1.00 | 26.54 |
| ATOM | 657 | O   | LYS | 1542 | 6.440  | -8.321  | 15.773 | 1.00 | 26.19 |
| ATOM | 658 | N   | ASN | 1543 | 7.193  | -8.733  | 13.697 | 1.00 | 24.36 |
| ATOM | 660 | CA  | ASN | 1543 | 8.357  | -7.874  | 13.852 | 1.00 | 24.08 |
| ATOM | 661 | CB  | ASN | 1543 | 9.601  | -8.596  | 13.359 | 1.00 | 22.69 |
| ATOM | 662 | CG  | ASN | 1543 | 9.781  | -9.950  | 14.029 | 1.00 | 22.81 |
| ATOM | 663 | OD1 | ASN | 1543 | 9.664  | -10.996 | 13.388 | 1.00 | 23.62 |
| ATOM | 664 | ND2 | ASN | 1543 | 10.028 | -9.938  | 15.324 | 1.00 | 24.94 |
| ATOM | 667 | C   | ASN | 1543 | 8.318  | -6.429  | 13.377 | 1.00 | 23.48 |
| ATOM | 668 | O   | ASN | 1543 | 9.351  | -5.861  | 13.059 | 1.00 | 22.94 |
| ATOM | 669 | N   | ILE | 1544 | 7.130  | -5.821  | 13.380 | 1.00 | 24.15 |
| ATOM | 671 | CA  | ILE | 1544 | 6.976  | -4.407  | 13.012 | 1.00 | 24.60 |
| ATOM | 672 | CB  | ILE | 1544 | 6.516  | -4.191  | 11.531 | 1.00 | 24.90 |
| ATOM | 673 | CG2 | ILE | 1544 | 7.495  | -4.852  | 10.571 | 1.00 | 21.57 |
| ATOM | 674 | CG1 | ILE | 1544 | 5.081  | -4.688  | 11.316 | 1.00 | 26.66 |
| ATOM | 675 | CD1 | ILE | 1544 | 4.481  | -4.321  | 9.945  | 1.00 | 23.98 |
| ATOM | 676 | C   | ILE | 1544 | 5.954  | -3.785  | 13.955 | 1.00 | 24.78 |
| ATOM | 677 | O   | ILE | 1544 | 5.160  | -4.503  | 14.558 | 1.00 | 27.87 |
| ATOM | 678 | N   | ILE | 1545 | 6.035  | -2.474  | 14.159 | 1.00 | 26.39 |
| ATOM | 680 | CA  | ILE | 1545 | 5.089  | -1.779  | 15.025 | 1.00 | 26.79 |
| ATOM | 681 | CB  | ILE | 1545 | 5.588  | -0.345  | 15.384 | 1.00 | 28.85 |
| ATOM | 682 | CG2 | ILE | 1545 | 4.512  | 0.449   | 16.103 | 1.00 | 23.60 |
| ATOM | 683 | CG1 | ILE | 1545 | 6.833  | -0.423  | 16.269 | 1.00 | 27.20 |
| ATOM | 684 | CD1 | ILE | 1545 | 6.565  | -0.990  | 17.639 | 1.00 | 27.12 |
| ATOM | 685 | C   | ILE | 1545 | 3.792  | -1.708  | 14.224 | 1.00 | 26.99 |
| ATOM | 686 | O   | ILE | 1545 | 3.720  | -1.023  | 13.197 | 1.00 | 27.61 |
| ATOM | 687 | N   | ASN | 1546 | 2.809  | -2.495  | 14.654 | 1.00 | 26.70 |
| ATOM | 689 | CA  | ASN | 1546 | 1.514  | -2.565  | 13.983 | 1.00 | 26.53 |
| ATOM | 690 | CB  | ASN | 1546 | 0.871  | -3.953  | 14.169 | 1.00 | 26.23 |
| ATOM | 691 | CG  | ASN | 1546 | 1.695  | -5.072  | 13.551 | 1.00 | 24.96 |
| ATOM | 692 | OD1 | ASN | 1546 | 1.773  | -5.206  | 12.330 | 1.00 | 28.08 |
| ATOM | 693 | ND2 | ASN | 1546 | 2.319  | -5.872  | 14.387 | 1.00 | 22.38 |
| ATOM | 696 | C   | ASN | 1546 | 0.521  | -1.497  | 14.418 | 1.00 | 26.89 |
| ATOM | 697 | O   | ASN | 1546 | 0.610  | -0.952  | 15.523 | 1.00 | 27.40 |
| ATOM | 698 | N   | LEU | 1547 | -0.349 | -1.138  | 13.481 | 1.00 | 27.77 |
| ATOM | 700 | CA  | LEU | 1547 | -1.416 | -0.175  | 13.701 | 1.00 | 28.28 |
| ATOM | 701 | CB  | LEU | 1547 | -1.958 | 0.313   | 12.361 | 1.00 | 27.04 |
| ATOM | 702 | CG  | LEU | 1547 | -3.199 | 1.194   | 12.408 | 1.00 | 25.74 |
| ATOM | 703 | CD1 | LEU | 1547 | -2.836 | 2.575   | 12.950 | 1.00 | 27.66 |
| ATOM | 704 | CD2 | LEU | 1547 | -3.799 | 1.289   | 11.014 | 1.00 | 23.38 |
| ATOM | 705 | C   | LEU | 1547 | -2.498 | -0.972  | 14.435 | 1.00 | 29.80 |
| ATOM | 706 | O   | LEU | 1547 | -2.766 | -2.135  | 14.105 | 1.00 | 28.63 |
| ATOM | 707 | N   | LEU | 1548 | -3.088 | -0.351  | 15.448 | 1.00 | 29.91 |
| ATOM | 709 | CA  | LEU | 1548 | -4.114 | -0.997  | 16.256 | 1.00 | 28.46 |
| ATOM | 710 | CB  | LEU | 1548 | -3.735 | -0.956  | 17.749 | 1.00 | 26.76 |
| ATOM | 711 | CG  | LEU | 1548 | -2.460 | -1.701  | 18.162 | 1.00 | 22.44 |
| ATOM | 712 | CD1 | LEU | 1548 | -2.277 | -1.554  | 19.653 | 1.00 | 21.91 |
| ATOM | 713 | CD2 | LEU | 1548 | -2.551 | -3.179  | 17.778 | 1.00 | 20.79 |
| ATOM | 714 | C   | LEU | 1548 | -5.480 | -0.365  | 16.058 | 1.00 | 27.31 |
| ATOM | 715 | O   | LEU | 1548 | -6.489 | -1.043  | 16.193 | 1.00 | 28.25 |
| ATOM | 716 | N   | GLY | 1549 | -5.506 | 0.925   | 15.732 | 1.00 | 24.02 |
| ATOM | 718 | CA  | GLY | 1549 | -6.774 | 1.598   | 15.553 | 1.00 | 24.57 |
| ATOM | 719 | C   | GLY | 1549 | -6.548 | 3.077   | 15.395 | 1.00 | 25.19 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 720 | O   | GLY | 1549 | -5.400  | 3.488  | 15.231 | 1.00 | 28.77 |
| ATOM | 721 | N   | ALA | 1550 | -7.617  | 3.875  | 15.427 | 1.00 | 24.66 |
| ATOM | 723 | CA  | ALA | 1550 | -7.487  | 5.319  | 15.282 | 1.00 | 24.17 |
| ATOM | 724 | CB  | ALA | 1550 | -7.206  | 5.680  | 13.824 | 1.00 | 24.29 |
| ATOM | 725 | C   | ALA | 1550 | -8.695  | 6.103  | 15.765 | 1.00 | 23.95 |
| ATOM | 726 | O   | ALA | 1550 | -9.810  | 5.590  | 15.780 | 1.00 | 24.95 |
| ATOM | 727 | N   | CYS | 1551 | -8.444  | 7.336  | 16.199 | 1.00 | 25.03 |
| ATOM | 729 | CA  | CYS | 1551 | -9.482  | 8.270  | 16.639 | 1.00 | 28.21 |
| ATOM | 730 | CB  | CYS | 1551 | -9.221  | 8.774  | 18.055 | 1.00 | 26.76 |
| ATOM | 731 | SG  | CYS | 1551 | -9.378  | 7.521  | 19.317 | 1.00 | 34.39 |
| ATOM | 732 | C   | CYS | 1551 | -9.359  | 9.426  | 15.656 | 1.00 | 29.98 |
| ATOM | 733 | O   | CYS | 1551 | -8.482  | 10.281 | 15.800 | 1.00 | 32.14 |
| ATOM | 734 | N   | THR | 1552 | -10.198 | 9.412  | 14.625 | 1.00 | 31.09 |
| ATOM | 736 | CA  | THR | 1552 | -10.135 | 10.435 | 13.595 | 1.00 | 32.91 |
| ATOM | 737 | CB  | THR | 1552 | -10.052 | 9.781  | 12.189 | 1.00 | 32.60 |
| ATOM | 738 | OG1 | THR | 1552 | -11.276 | 9.097  | 11.890 | 1.00 | 32.12 |
| ATOM | 740 | CG2 | THR | 1552 | -8.928  | 8.768  | 12.144 | 1.00 | 32.74 |
| ATOM | 741 | C   | THR | 1552 | -11.282 | 11.419 | 13.591 | 1.00 | 35.26 |
| ATOM | 742 | O   | THR | 1552 | -11.171 | 12.525 | 13.057 | 1.00 | 35.10 |
| ATOM | 743 | N   | GLN | 1553 | -12.397 | 11.014 | 14.179 | 1.00 | 39.01 |
| ATOM | 745 | CA  | GLN | 1553 | -13.585 | 11.846 | 14.180 | 1.00 | 41.97 |
| ATOM | 746 | CB  | GLN | 1553 | -14.832 | 10.968 | 14.020 | 1.00 | 41.17 |
| ATOM | 747 | CG  | GLN | 1553 | -14.915 | 10.238 | 12.672 | 1.00 | 39.06 |
| ATOM | 748 | CD  | GLN | 1553 | -14.900 | 11.200 | 11.496 | 1.00 | 41.84 |
| ATOM | 749 | OE1 | GLN | 1553 | -15.785 | 12.045 | 11.359 | 1.00 | 41.92 |
| ATOM | 750 | NE2 | GLN | 1553 | -13.876 | 11.090 | 10.652 | 1.00 | 42.33 |
| ATOM | 753 | C   | GLN | 1553 | -13.727 | 12.777 | 15.372 | 1.00 | 45.35 |
| ATOM | 754 | O   | GLN | 1553 | -13.358 | 12.423 | 16.489 | 1.00 | 47.02 |
| ATOM | 755 | N   | ASP | 1554 | -14.225 | 13.981 | 15.090 | 1.00 | 48.60 |
| ATOM | 757 | CA  | ASP | 1554 | -14.479 | 15.016 | 16.084 | 1.00 | 50.64 |
| ATOM | 758 | CB  | ASP | 1554 | -15.832 | 14.766 | 16.758 | 1.00 | 54.52 |
| ATOM | 759 | CG  | ASP | 1554 | -17.003 | 14.955 | 15.809 | 1.00 | 60.54 |
| ATOM | 760 | OD1 | ASP | 1554 | -18.072 | 15.409 | 16.274 | 1.00 | 66.04 |
| ATOM | 761 | OD2 | ASP | 1554 | -16.860 | 14.661 | 14.601 | 1.00 | 65.09 |
| ATOM | 762 | C   | ASP | 1554 | -13.395 | 15.173 | 17.133 | 1.00 | 49.89 |
| ATOM | 763 | O   | ASP | 1554 | -13.611 | 14.879 | 18.310 | 1.00 | 51.48 |
| ATOM | 764 | N   | GLY | 1555 | -12.232 | 15.643 | 16.699 | 1.00 | 48.40 |
| ATOM | 766 | CA  | GLY | 1555 | -11.131 | 15.834 | 17.617 | 1.00 | 46.16 |
| ATOM | 767 | C   | GLY | 1555 | -9.798  | 15.626 | 16.935 | 1.00 | 44.64 |
| ATOM | 768 | O   | GLY | 1555 | -9.737  | 15.581 | 15.716 | 1.00 | 45.22 |
| ATOM | 769 | N   | PRO | 1556 | -8.708  | 15.525 | 17.702 | 1.00 | 44.68 |
| ATOM | 770 | CD  | PRO | 1556 | -8.672  | 15.683 | 19.164 | 1.00 | 45.39 |
| ATOM | 771 | CA  | PRO | 1556 | -7.359  | 15.326 | 17.177 | 1.00 | 42.95 |
| ATOM | 772 | CB  | PRO | 1556 | -6.484  | 15.549 | 18.411 | 1.00 | 43.74 |
| ATOM | 773 | CG  | PRO | 1556 | -7.354  | 16.347 | 19.345 | 1.00 | 47.32 |
| ATOM | 774 | C   | PRO | 1556 | -7.164  | 13.912 | 16.665 | 1.00 | 42.34 |
| ATOM | 775 | O   | PRO | 1556 | -7.636  | 12.953 | 17.287 | 1.00 | 42.75 |
| ATOM | 776 | N   | LEU | 1557 | -6.451  | 13.788 | 15.547 | 1.00 | 39.83 |
| ATOM | 778 | CA  | LEU | 1557 | -6.169  | 12.490 | 14.954 | 1.00 | 36.64 |
| ATOM | 779 | CB  | LEU | 1557 | -5.496  | 12.669 | 13.587 | 1.00 | 34.49 |
| ATOM | 780 | CG  | LEU | 1557 | -5.009  | 11.404 | 12.870 | 1.00 | 31.29 |
| ATOM | 781 | CD1 | LEU | 1557 | -6.169  | 10.436 | 12.628 | 1.00 | 27.86 |
| ATOM | 782 | CD2 | LEU | 1557 | -4.314  | 11.775 | 11.570 | 1.00 | 25.40 |
| ATOM | 783 | C   | LEU | 1557 | -5.244  | 11.732 | 15.894 | 1.00 | 35.44 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 784 | O   | LEU | 1557 | -4.210 | 12.264 | 16.316 | 1.00 | 36.12 |
| ATOM | 785 | N   | TYR | 1558 | -5.664 | 10.539 | 16.292 | 1.00 | 32.49 |
| ATOM | 787 | CA  | TYR | 1558 | -4.861 | 9.697  | 17.157 | 1.00 | 31.87 |
| ATOM | 788 | CB  | TYR | 1558 | -5.590 | 9.348  | 18.470 | 1.00 | 33.93 |
| ATOM | 789 | CG  | TYR | 1558 | -5.695 | 10.476 | 19.471 | 1.00 | 35.34 |
| ATOM | 790 | CD1 | TYR | 1558 | -6.566 | 10.394 | 20.565 | 1.00 | 37.12 |
| ATOM | 791 | CE1 | TYR | 1558 | -6.683 | 11.456 | 21.479 | 1.00 | 36.44 |
| ATOM | 792 | CD2 | TYR | 1558 | -4.945 | 11.636 | 19.317 | 1.00 | 37.27 |
| ATOM | 793 | CE2 | TYR | 1558 | -5.054 | 12.690 | 20.213 | 1.00 | 39.62 |
| ATOM | 794 | CZ  | TYR | 1558 | -5.921 | 12.598 | 21.289 | 1.00 | 40.05 |
| ATOM | 795 | OH  | TYR | 1558 | -6.008 | 13.668 | 22.155 | 1.00 | 44.98 |
| ATOM | 797 | C   | TYR | 1558 | -4.600 | 8.419  | 16.387 | 1.00 | 31.58 |
| ATOM | 798 | O   | TYR | 1558 | -5.532 | 7.750  | 15.936 | 1.00 | 30.22 |
| ATOM | 799 | N   | VAL | 1559 | -3.331 | 8.129  | 16.153 | 1.00 | 33.43 |
| ATOM | 801 | CA  | VAL | 1559 | -2.947 | 6.907  | 15.463 | 1.00 | 31.42 |
| ATOM | 802 | CB  | VAL | 1559 | -1.849 | 7.160  | 14.419 | 1.00 | 32.31 |
| ATOM | 803 | CG1 | VAL | 1559 | -1.516 | 5.851  | 13.675 | 1.00 | 26.79 |
| ATOM | 804 | CG2 | VAL | 1559 | -2.308 | 8.265  | 13.453 | 1.00 | 30.63 |
| ATOM | 805 | C   | VAL | 1559 | -2.438 | 5.979  | 16.556 | 1.00 | 28.67 |
| ATOM | 806 | O   | VAL | 1559 | -1.393 | 6.223  | 17.155 | 1.00 | 30.08 |
| ATOM | 807 | N   | ILE | 1560 | -3.230 | 4.960  | 16.852 | 1.00 | 25.80 |
| ATOM | 809 | CA  | ILE | 1560 | -2.915 | 3.998  | 17.894 | 1.00 | 25.33 |
| ATOM | 810 | CB  | ILE | 1560 | -4.219 | 3.443  | 18.506 | 1.00 | 22.34 |
| ATOM | 811 | CG2 | ILE | 1560 | -3.931 | 2.695  | 19.784 | 1.00 | 20.36 |
| ATOM | 812 | CG1 | ILE | 1560 | -5.172 | 4.603  | 18.809 | 1.00 | 21.34 |
| ATOM | 813 | CD1 | ILE | 1560 | -6.583 | 4.190  | 19.093 | 1.00 | 20.68 |
| ATOM | 814 | C   | ILE | 1560 | -2.073 | 2.857  | 17.341 | 1.00 | 27.16 |
| ATOM | 815 | O   | ILE | 1560 | -2.520 | 2.116  | 16.455 | 1.00 | 29.67 |
| ATOM | 816 | N   | VAL | 1561 | -0.858 | 2.714  | 17.860 | 1.00 | 27.69 |
| ATOM | 818 | CA  | VAL | 1561 | 0.060  | 1.667  | 17.411 | 1.00 | 28.27 |
| ATOM | 819 | CB  | VAL | 1561 | 1.311  | 2.269  | 16.696 | 1.00 | 27.34 |
| ATOM | 820 | CG1 | VAL | 1561 | 0.892  | 3.019  | 15.445 | 1.00 | 21.76 |
| ATOM | 821 | CG2 | VAL | 1561 | 2.074  | 3.201  | 17.639 | 1.00 | 26.00 |
| ATOM | 822 | C   | VAL | 1561 | 0.509  | 0.809  | 18.588 | 1.00 | 28.70 |
| ATOM | 823 | O   | VAL | 1561 | 0.221  | 1.139  | 19.746 | 1.00 | 30.52 |
| ATOM | 824 | N   | GLU | 1562 | 1.166  | -0.311 | 18.286 | 1.00 | 28.64 |
| ATOM | 826 | CA  | GLU | 1562 | 1.658  | -1.220 | 19.318 | 1.00 | 27.77 |
| ATOM | 827 | CB  | GLU | 1562 | 2.278  | -2.465 | 18.693 | 1.00 | 24.57 |
| ATOM | 828 | CG  | GLU | 1562 | 1.251  | -3.452 | 18.208 | 1.00 | 24.76 |
| ATOM | 829 | CD  | GLU | 1562 | 1.864  | -4.641 | 17.501 | 1.00 | 27.27 |
| ATOM | 830 | OE1 | GLU | 1562 | 1.272  | -5.739 | 17.580 | 1.00 | 28.27 |
| ATOM | 831 | OE2 | GLU | 1562 | 2.920  | -4.487 | 16.849 | 1.00 | 29.25 |
| ATOM | 832 | C   | GLU | 1562 | 2.674  | -0.538 | 20.217 | 1.00 | 28.79 |
| ATOM | 833 | O   | GLU | 1562 | 3.453  | 0.292  | 19.760 | 1.00 | 29.38 |
| ATOM | 834 | N   | TYR | 1563 | 2.627  | -0.871 | 21.503 | 1.00 | 30.84 |
| ATOM | 836 | CA  | TYR | 1563 | 3.534  | -0.304 | 22.493 | 1.00 | 31.43 |
| ATOM | 837 | CB  | TYR | 1563 | 2.782  | -0.088 | 23.799 | 1.00 | 32.10 |
| ATOM | 838 | CG  | TYR | 1563 | 3.632  | 0.376  | 24.952 | 1.00 | 33.93 |
| ATOM | 839 | CD1 | TYR | 1563 | 4.366  | 1.552  | 24.873 | 1.00 | 34.85 |
| ATOM | 840 | CE1 | TYR | 1563 | 5.140  | 1.992  | 25.947 | 1.00 | 37.53 |
| ATOM | 841 | CD2 | TYR | 1563 | 3.683  | -0.356 | 26.136 | 1.00 | 34.81 |
| ATOM | 842 | CE2 | TYR | 1563 | 4.452  | 0.072  | 27.211 | 1.00 | 34.01 |
| ATOM | 843 | CZ  | TYR | 1563 | 5.173  | 1.245  | 27.113 | 1.00 | 35.79 |
| ATOM | 844 | OH  | TYR | 1563 | 5.920  | 1.677  | 28.184 | 1.00 | 39.10 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 846 | C   | TYR | 1563 | 4.767  | -1.166 | 22.731 | 1.00 | 31.38 |
| ATOM | 847 | O   | TYR | 1563 | 4.672  | -2.385 | 22.905 | 1.00 | 30.73 |
| ATOM | 848 | N   | ALA | 1564 | 5.930  | -0.525 | 22.725 | 1.00 | 32.23 |
| ATOM | 850 | CA  | ALA | 1564 | 7.198  | -1.212 | 22.953 | 1.00 | 35.90 |
| ATOM | 851 | CB  | ALA | 1564 | 8.178  | -0.866 | 21.833 | 1.00 | 36.44 |
| ATOM | 852 | C   | ALA | 1564 | 7.711  | -0.719 | 24.307 | 1.00 | 36.52 |
| ATOM | 853 | O   | ALA | 1564 | 8.332  | 0.349  | 24.403 | 1.00 | 39.16 |
| ATOM | 854 | N   | SER | 1565 | 7.424  | -1.482 | 25.359 | 1.00 | 34.62 |
| ATOM | 856 | CA  | SER | 1565 | 7.801  | -1.071 | 26.700 | 1.00 | 34.91 |
| ATOM | 857 | CB  | SER | 1565 | 7.124  | -1.945 | 27.750 | 1.00 | 32.11 |
| ATOM | 858 | OG  | SER | 1565 | 7.606  | -3.271 | 27.696 | 1.00 | 32.92 |
| ATOM | 860 | C   | SER | 1565 | 9.288  | -0.968 | 26.996 | 1.00 | 35.56 |
| ATOM | 861 | O   | SER | 1565 | 9.674  | -0.219 | 27.886 | 1.00 | 38.69 |
| ATOM | 862 | N   | LYS | 1566 | 10.127 | -1.673 | 26.243 | 1.00 | 33.70 |
| ATOM | 864 | CA  | LYS | 1566 | 11.557 | -1.625 | 26.526 | 1.00 | 31.40 |
| ATOM | 865 | CB  | LYS | 1566 | 12.137 | -3.033 | 26.530 | 1.00 | 30.56 |
| ATOM | 866 | CG  | LYS | 1566 | 11.555 | -3.869 | 27.664 | 1.00 | 32.32 |
| ATOM | 867 | CD  | LYS | 1566 | 11.997 | -5.308 | 27.599 | 1.00 | 36.47 |
| ATOM | 868 | CE  | LYS | 1566 | 11.632 | -6.031 | 28.872 | 1.00 | 36.97 |
| ATOM | 869 | NZ  | LYS | 1566 | 12.104 | -7.436 | 28.804 | 1.00 | 41.62 |
| ATOM | 873 | C   | LYS | 1566 | 12.380 | -0.664 | 25.683 | 1.00 | 32.18 |
| ATOM | 874 | O   | LYS | 1566 | 13.616 | -0.691 | 25.715 | 1.00 | 32.57 |
| ATOM | 875 | N   | GLY | 1567 | 11.686 | 0.223  | 24.973 | 1.00 | 33.39 |
| ATOM | 877 | CA  | GLY | 1567 | 12.345 | 1.224  | 24.156 | 1.00 | 32.13 |
| ATOM | 878 | C   | GLY | 1567 | 13.074 | 0.719  | 22.928 | 1.00 | 31.70 |
| ATOM | 879 | O   | GLY | 1567 | 12.912 | -0.430 | 22.530 | 1.00 | 33.30 |
| ATOM | 880 | N   | ASN | 1568 | 13.883 | 1.589  | 22.331 | 1.00 | 31.08 |
| ATOM | 882 | CA  | ASN | 1568 | 14.632 | 1.230  | 21.139 | 1.00 | 31.00 |
| ATOM | 883 | CB  | ASN | 1568 | 15.066 | 2.478  | 20.365 | 1.00 | 31.30 |
| ATOM | 884 | CG  | ASN | 1568 | 16.127 | 3.271  | 21.074 | 1.00 | 30.47 |
| ATOM | 885 | OD1 | ASN | 1568 | 17.130 | 2.733  | 21.508 | 1.00 | 32.19 |
| ATOM | 886 | ND2 | ASN | 1568 | 15.934 | 4.580  | 21.144 | 1.00 | 32.13 |
| ATOM | 889 | C   | ASN | 1568 | 15.802 | 0.295  | 21.393 | 1.00 | 30.62 |
| ATOM | 890 | O   | ASN | 1568 | 16.357 | 0.256  | 22.483 | 1.00 | 32.91 |
| ATOM | 891 | N   | LEU | 1569 | 16.193 | -0.428 | 20.354 | 1.00 | 30.92 |
| ATOM | 893 | CA  | LEU | 1569 | 17.269 | -1.403 | 20.417 | 1.00 | 31.22 |
| ATOM | 894 | CB  | LEU | 1569 | 17.418 | -2.083 | 19.054 | 1.00 | 29.57 |
| ATOM | 895 | CG  | LEU | 1569 | 18.415 | -3.231 | 18.893 | 1.00 | 29.22 |
| ATOM | 896 | CD1 | LEU | 1569 | 18.284 | -4.261 | 20.024 | 1.00 | 21.30 |
| ATOM | 897 | CD2 | LEU | 1569 | 18.184 | -3.863 | 17.523 | 1.00 | 24.99 |
| ATOM | 898 | C   | LEU | 1569 | 18.609 | -0.838 | 20.878 | 1.00 | 32.44 |
| ATOM | 899 | O   | LEU | 1569 | 19.328 | -1.499 | 21.618 | 1.00 | 33.12 |
| ATOM | 900 | N   | ARG | 1570 | 18.954 | 0.370  | 20.432 | 1.00 | 33.24 |
| ATOM | 902 | CA  | ARG | 1570 | 20.218 | 0.983  | 20.834 | 1.00 | 33.01 |
| ATOM | 903 | CB  | ARG | 1570 | 20.348 | 2.394  | 20.256 | 1.00 | 32.36 |
| ATOM | 904 | CG  | ARG | 1570 | 21.586 | 3.129  | 20.758 | 1.00 | 38.28 |
| ATOM | 905 | CD  | ARG | 1570 | 21.672 | 4.538  | 20.221 | 1.00 | 41.93 |
| ATOM | 906 | NE  | ARG | 1570 | 20.428 | 5.278  | 20.412 | 1.00 | 49.82 |
| ATOM | 908 | CZ  | ARG | 1570 | 19.975 | 5.721  | 21.584 | 1.00 | 52.37 |
| ATOM | 909 | NH1 | ARG | 1570 | 20.659 | 5.510  | 22.712 | 1.00 | 51.61 |
| ATOM | 912 | NH2 | ARG | 1570 | 18.824 | 6.377  | 21.622 | 1.00 | 53.28 |
| ATOM | 915 | C   | ARG | 1570 | 20.308 | 1.023  | 22.371 | 1.00 | 33.90 |
| ATOM | 916 | O   | ARG | 1570 | 21.184 | 0.391  | 22.970 | 1.00 | 33.17 |
| ATOM | 917 | N   | GLU | 1571 | 19.359 | 1.730  | 22.981 | 1.00 | 33.45 |



|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 919 | CA  | GLU | 1571 | 19.284 | 1.861  | 24.432 | 1.00 | 34.87 |
| ATOM | 920 | CB  | GLU | 1571 | 18.052 | 2.688  | 24.794 | 1.00 | 35.83 |
| ATOM | 921 | CG  | GLU | 1571 | 18.158 | 4.145  | 24.354 | 1.00 | 41.61 |
| ATOM | 922 | CD  | GLU | 1571 | 16.814 | 4.870  | 24.318 | 1.00 | 47.33 |
| ATOM | 923 | OE1 | GLU | 1571 | 15.759 | 4.199  | 24.362 | 1.00 | 50.68 |
| ATOM | 924 | OE2 | GLU | 1571 | 16.812 | 6.120  | 24.218 | 1.00 | 48.07 |
| ATOM | 925 | C   | GLU | 1571 | 19.223 | 0.487  | 25.098 | 1.00 | 34.39 |
| ATOM | 926 | O   | GLU | 1571 | 19.968 | 0.202  | 26.041 | 1.00 | 34.04 |
| ATOM | 927 | N   | TYR | 1572 | 18.363 | -0.376 | 24.572 | 1.00 | 33.49 |
| ATOM | 929 | CA  | TYR | 1572 | 18.204 | -1.728 | 25.083 | 1.00 | 30.45 |
| ATOM | 930 | CB  | TYR | 1572 | 17.210 | -2.495 | 24.202 | 1.00 | 28.13 |
| ATOM | 931 | CG  | TYR | 1572 | 17.074 | -3.971 | 24.487 | 1.00 | 25.80 |
| ATOM | 932 | CD1 | TYR | 1572 | 16.105 | -4.443 | 25.371 | 1.00 | 28.92 |
| ATOM | 933 | CE1 | TYR | 1572 | 15.954 | -5.804 | 25.618 | 1.00 | 30.03 |
| ATOM | 934 | CD2 | TYR | 1572 | 17.899 | -4.899 | 23.863 | 1.00 | 24.61 |
| ATOM | 935 | CE2 | TYR | 1572 | 17.760 | -6.260 | 24.102 | 1.00 | 26.05 |
| ATOM | 936 | CZ  | TYR | 1572 | 16.790 | -6.705 | 24.982 | 1.00 | 29.23 |
| ATOM | 937 | OH  | TYR | 1572 | 16.651 | -8.052 | 25.227 | 1.00 | 33.74 |
| ATOM | 939 | C   | TYR | 1572 | 19.549 | -2.447 | 25.113 | 1.00 | 31.30 |
| ATOM | 940 | O   | TYR | 1572 | 19.880 | -3.126 | 26.090 | 1.00 | 32.43 |
| ATOM | 941 | N   | LEU | 1573 | 20.334 | -2.266 | 24.058 | 1.00 | 29.68 |
| ATOM | 943 | CA  | LEU | 1573 | 21.625 | -2.923 | 23.972 | 1.00 | 30.04 |
| ATOM | 944 | CB  | LEU | 1573 | 22.145 | -2.909 | 22.529 | 1.00 | 26.13 |
| ATOM | 945 | CG  | LEU | 1573 | 21.532 | -3.870 | 21.490 | 1.00 | 25.24 |
| ATOM | 946 | CD1 | LEU | 1573 | 22.097 | -3.563 | 20.113 | 1.00 | 19.70 |
| ATOM | 947 | CD2 | LEU | 1573 | 21.807 | -5.317 | 21.839 | 1.00 | 22.05 |
| ATOM | 948 | C   | LEU | 1573 | 22.645 | -2.308 | 24.927 | 1.00 | 34.47 |
| ATOM | 949 | O   | LEU | 1573 | 23.354 | -3.031 | 25.644 | 1.00 | 34.95 |
| ATOM | 950 | N   | GLN | 1574 | 22.691 | -0.980 | 24.978 | 1.00 | 35.47 |
| ATOM | 952 | CA  | GLN | 1574 | 23.639 | -0.293 | 25.850 | 1.00 | 37.09 |
| ATOM | 953 | CB  | GLN | 1574 | 23.601 | 1.206  | 25.579 | 1.00 | 36.70 |
| ATOM | 954 | CG  | GLN | 1574 | 24.033 | 1.559  | 24.171 | 1.00 | 39.77 |
| ATOM | 955 | CD  | GLN | 1574 | 23.960 | 3.045  | 23.884 | 1.00 | 41.51 |
| ATOM | 956 | OE1 | GLN | 1574 | 23.592 | 3.837  | 24.751 | 1.00 | 42.57 |
| ATOM | 957 | NE2 | GLN | 1574 | 24.288 | 3.431  | 22.652 | 1.00 | 41.34 |
| ATOM | 960 | C   | GLN | 1574 | 23.400 | -0.588 | 27.332 | 1.00 | 37.85 |
| ATOM | 961 | O   | GLN | 1574 | 24.343 | -0.801 | 28.090 | 1.00 | 38.87 |
| ATOM | 962 | N   | ALA | 1575 | 22.131 | -0.667 | 27.720 | 1.00 | 39.01 |
| ATOM | 964 | CA  | ALA | 1575 | 21.740 | -0.944 | 29.098 | 1.00 | 37.00 |
| ATOM | 965 | CB  | ALA | 1575 | 20.261 | -0.678 | 29.273 | 1.00 | 35.71 |
| ATOM | 966 | C   | ALA | 1575 | 22.061 | -2.359 | 29.559 | 1.00 | 39.14 |
| ATOM | 967 | O   | ALA | 1575 | 21.839 | -2.692 | 30.719 | 1.00 | 43.81 |
| ATOM | 968 | N   | ARG | 1576 | 22.563 | -3.201 | 28.665 | 1.00 | 38.39 |
| ATOM | 970 | CA  | ARG | 1576 | 22.897 | -4.568 | 29.032 | 1.00 | 37.71 |
| ATOM | 971 | CB  | ARG | 1576 | 21.994 | -5.544 | 28.290 | 1.00 | 38.26 |
| ATOM | 972 | CG  | ARG | 1576 | 20.555 | -5.383 | 28.700 | 1.00 | 38.00 |
| ATOM | 973 | CD  | ARG | 1576 | 19.653 | -6.282 | 27.920 | 1.00 | 34.74 |
| ATOM | 974 | NE  | ARG | 1576 | 18.279 | -6.190 | 28.388 | 1.00 | 32.88 |
| ATOM | 976 | CZ  | ARG | 1576 | 17.572 | -5.066 | 28.442 | 1.00 | 34.02 |
| ATOM | 977 | NH1 | ARG | 1576 | 18.114 | -3.913 | 28.068 | 1.00 | 35.57 |
| ATOM | 980 | NH2 | ARG | 1576 | 16.298 | -5.102 | 28.800 | 1.00 | 36.71 |
| ATOM | 983 | C   | ARG | 1576 | 24.365 | -4.927 | 28.828 | 1.00 | 39.59 |
| ATOM | 984 | O   | ARG | 1576 | 24.735 | -6.113 | 28.788 | 1.00 | 39.83 |
| ATOM | 985 | N   | ARG | 1577 | 25.200 | -3.900 | 28.687 | 1.00 | 38.82 |

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|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 987  | CA  | ARG | 1577 | 26.631 | -4.101  | 28.520 | 1.00 | 39.07 |
| ATOM | 988  | CB  | ARG | 1577 | 27.310 | -2.797  | 28.090 | 1.00 | 34.91 |
| ATOM | 989  | CG  | ARG | 1577 | 27.033 | -2.323  | 26.681 | 1.00 | 33.87 |
| ATOM | 990  | CD  | ARG | 1577 | 27.730 | -0.981  | 26.428 | 1.00 | 33.06 |
| ATOM | 991  | NE  | ARG | 1577 | 27.722 | -0.612  | 25.015 | 1.00 | 38.87 |
| ATOM | 993  | CZ  | ARG | 1577 | 28.174 | 0.538   | 24.517 | 1.00 | 39.76 |
| ATOM | 994  | NH1 | ARG | 1577 | 28.683 | 1.470   | 25.305 | 1.00 | 40.68 |
| ATOM | 997  | NH2 | ARG | 1577 | 28.122 | 0.758   | 23.213 | 1.00 | 43.26 |
| ATOM | 1000 | C   | ARG | 1577 | 27.181 | -4.501  | 29.885 | 1.00 | 41.58 |
| ATOM | 1001 | O   | ARG | 1577 | 26.586 | -4.181  | 30.917 | 1.00 | 42.48 |
| ATOM | 1002 | N   | PRO | 1578 | 28.294 | -5.249  | 29.919 | 1.00 | 43.07 |
| ATOM | 1003 | CD  | PRO | 1578 | 29.110 | -5.812  | 28.823 | 1.00 | 43.36 |
| ATOM | 1004 | CA  | PRO | 1578 | 28.839 | -5.626  | 31.223 | 1.00 | 42.69 |
| ATOM | 1005 | CB  | PRO | 1578 | 29.966 | -6.595  | 30.857 | 1.00 | 42.22 |
| ATOM | 1006 | CG  | PRO | 1578 | 30.412 | -6.103  | 29.516 | 1.00 | 43.64 |
| ATOM | 1007 | C   | PRO | 1578 | 29.366 | -4.350  | 31.882 | 1.00 | 43.37 |
| ATOM | 1008 | O   | PRO | 1578 | 29.530 | -3.319  | 31.215 | 1.00 | 42.50 |
| ATOM | 1009 | N   | PRO | 1579 | 29.596 | -4.380  | 33.198 | 1.00 | 45.24 |
| ATOM | 1010 | CD  | PRO | 1579 | 29.279 | -5.435  | 34.174 | 1.00 | 44.69 |
| ATOM | 1011 | CA  | PRO | 1579 | 30.099 | -3.187  | 33.882 | 1.00 | 46.27 |
| ATOM | 1012 | CB  | PRO | 1579 | 29.979 | -3.567  | 35.353 | 1.00 | 45.78 |
| ATOM | 1013 | CG  | PRO | 1579 | 28.894 | -4.615  | 35.361 | 1.00 | 46.15 |
| ATOM | 1014 | C   | PRO | 1579 | 31.548 | -2.869  | 33.500 | 1.00 | 48.38 |
| ATOM | 1015 | O   | PRO | 1579 | 32.410 | -3.753  | 33.478 | 1.00 | 50.64 |
| ATOM | 1016 | N   | GLU | 1592 | 19.022 | -5.398  | 32.495 | 1.00 | 65.98 |
| ATOM | 1018 | CA  | GLU | 1592 | 20.442 | -5.048  | 32.492 | 1.00 | 64.80 |
| ATOM | 1019 | CB  | GLU | 1592 | 20.796 | -4.241  | 33.740 | 1.00 | 67.30 |
| ATOM | 1020 | C   | GLU | 1592 | 21.351 | -6.275  | 32.371 | 1.00 | 63.80 |
| ATOM | 1021 | O   | GLU | 1592 | 22.545 | -6.149  | 32.089 | 1.00 | 65.21 |
| ATOM | 1022 | N   | GLU | 1593 | 20.789 | -7.458  | 32.607 | 1.00 | 61.44 |
| ATOM | 1024 | CA  | GLU | 1593 | 21.560 | -8.691  | 32.495 | 1.00 | 60.82 |
| ATOM | 1025 | CB  | GLU | 1593 | 20.681 | -9.899  | 32.807 | 1.00 | 61.47 |
| ATOM | 1026 | C   | GLU | 1593 | 22.144 | -8.803  | 31.089 | 1.00 | 59.12 |
| ATOM | 1027 | O   | GLU | 1593 | 21.468 | -8.525  | 30.097 | 1.00 | 59.49 |
| ATOM | 1028 | N   | GLN | 1594 | 23.408 | -9.201  | 31.017 | 1.00 | 57.33 |
| ATOM | 1030 | CA  | GLN | 1594 | 24.103 | -9.334  | 29.744 | 1.00 | 55.30 |
| ATOM | 1031 | CB  | GLN | 1594 | 25.523 | -9.880  | 29.957 | 1.00 | 54.87 |
| ATOM | 1032 | CG  | GLN | 1594 | 26.438 | -8.959  | 30.757 | 1.00 | 53.34 |
| ATOM | 1033 | CD  | GLN | 1594 | 27.704 | -9.660  | 31.248 | 1.00 | 55.27 |
| ATOM | 1034 | OE1 | GLN | 1594 | 28.256 | -10.536 | 30.572 | 1.00 | 56.47 |
| ATOM | 1035 | NE2 | GLN | 1594 | 28.166 | -9.275  | 32.434 | 1.00 | 51.46 |
| ATOM | 1038 | C   | GLN | 1594 | 23.336 | -10.229 | 28.781 | 1.00 | 52.29 |
| ATOM | 1039 | O   | GLN | 1594 | 22.648 | -11.166 | 29.190 | 1.00 | 52.56 |
| ATOM | 1040 | N   | LEU | 1595 | 23.447 | -9.913  | 27.499 | 1.00 | 49.40 |
| ATOM | 1042 | CA  | LEU | 1595 | 22.783 | -10.676 | 26.455 | 1.00 | 46.00 |
| ATOM | 1043 | CB  | LEU | 1595 | 22.452 | -9.760  | 25.274 | 1.00 | 42.94 |
| ATOM | 1044 | CG  | LEU | 1595 | 21.390 | -8.711  | 25.626 | 1.00 | 43.90 |
| ATOM | 1045 | CD1 | LEU | 1595 | 21.495 | -7.484  | 24.743 | 1.00 | 39.46 |
| ATOM | 1046 | CD2 | LEU | 1595 | 20.005 | -9.347  | 25.569 | 1.00 | 41.86 |
| ATOM | 1047 | C   | LEU | 1595 | 23.741 | -11.762 | 26.029 | 1.00 | 43.96 |
| ATOM | 1048 | O   | LEU | 1595 | 24.950 | -11.550 | 26.043 | 1.00 | 44.24 |
| ATOM | 1049 | N   | SER | 1596 | 23.217 | -12.941 | 25.714 | 1.00 | 43.29 |
| ATOM | 1051 | CA  | SER | 1596 | 24.076 | -14.027 | 25.275 | 1.00 | 42.40 |
| ATOM | 1052 | CB  | SER | 1596 | 23.388 | -15.374 | 25.484 | 1.00 | 41.83 |

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|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1053 | OG  | SER | 1596 | 22.218 | -15.483 | 24.697 | 1.00 | 44.25 |
| ATOM | 1055 | C   | SER | 1596 | 24.392 | -13.817 | 23.800 | 1.00 | 42.64 |
| ATOM | 1056 | O   | SER | 1596 | 23.857 | -12.900 | 23.171 | 1.00 | 43.14 |
| ATOM | 1057 | N   | SER | 1597 | 25.277 | -14.645 | 23.255 | 1.00 | 42.59 |
| ATOM | 1059 | CA  | SER | 1597 | 25.629 | -14.553 | 21.850 | 1.00 | 42.91 |
| ATOM | 1060 | CB  | SER | 1597 | 26.739 | -15.547 | 21.516 | 1.00 | 45.26 |
| ATOM | 1061 | OG  | SER | 1597 | 27.812 | -15.436 | 22.431 | 1.00 | 56.41 |
| ATOM | 1063 | C   | SER | 1597 | 24.380 | -14.909 | 21.048 | 1.00 | 42.35 |
| ATOM | 1064 | O   | SER | 1597 | 24.113 | -14.322 | 20.003 | 1.00 | 43.71 |
| ATOM | 1065 | N   | LYS | 1598 | 23.621 | -15.881 | 21.544 | 1.00 | 40.61 |
| ATOM | 1067 | CA  | LYS | 1598 | 22.405 | -16.298 | 20.867 | 1.00 | 38.61 |
| ATOM | 1068 | CB  | LYS | 1598 | 21.848 | -17.575 | 21.483 | 1.00 | 36.33 |
| ATOM | 1069 | CG  | LYS | 1598 | 21.135 | -18.439 | 20.468 | 1.00 | 40.09 |
| ATOM | 1070 | CD  | LYS | 1598 | 20.213 | -19.434 | 21.118 | 1.00 | 43.39 |
| ATOM | 1071 | CE  | LYS | 1598 | 19.766 | -20.494 | 20.122 | 1.00 | 48.25 |
| ATOM | 1072 | NZ  | LYS | 1598 | 20.930 | -21.290 | 19.623 | 1.00 | 50.46 |
| ATOM | 1076 | C   | LYS | 1598 | 21.348 | -15.194 | 20.895 | 1.00 | 38.17 |
| ATOM | 1077 | O   | LYS | 1598 | 20.579 | -15.053 | 19.945 | 1.00 | 41.27 |
| ATOM | 1078 | N   | ASP | 1599 | 21.321 | -14.408 | 21.969 | 1.00 | 35.90 |
| ATOM | 1080 | CA  | ASP | 1599 | 20.366 | -13.307 | 22.099 | 1.00 | 34.08 |
| ATOM | 1081 | CB  | ASP | 1599 | 20.450 | -12.661 | 23.477 | 1.00 | 37.83 |
| ATOM | 1082 | CG  | ASP | 1599 | 19.822 | -13.505 | 24.562 | 1.00 | 39.93 |
| ATOM | 1083 | OD1 | ASP | 1599 | 20.089 | -13.217 | 25.742 | 1.00 | 45.85 |
| ATOM | 1084 | OD2 | ASP | 1599 | 19.060 | -14.444 | 24.240 | 1.00 | 41.06 |
| ATOM | 1085 | C   | ASP | 1599 | 20.634 | -12.243 | 21.061 | 1.00 | 32.37 |
| ATOM | 1086 | O   | ASP | 1599 | 19.704 | -11.701 | 20.466 | 1.00 | 32.58 |
| ATOM | 1087 | N   | LEU | 1600 | 21.915 | -11.945 | 20.873 | 1.00 | 30.45 |
| ATOM | 1089 | CA  | LEU | 1600 | 22.355 | -10.948 | 19.902 | 1.00 | 29.59 |
| ATOM | 1090 | CB  | LEU | 1600 | 23.841 | -10.654 | 20.097 | 1.00 | 28.59 |
| ATOM | 1091 | CG  | LEU | 1600 | 24.238 | -10.057 | 21.449 | 1.00 | 24.59 |
| ATOM | 1092 | CD1 | LEU | 1600 | 25.747 | -9.869  | 21.522 | 1.00 | 18.40 |
| ATOM | 1093 | CD2 | LEU | 1600 | 23.529 | -8.745  | 21.626 | 1.00 | 21.71 |
| ATOM | 1094 | C   | LEU | 1600 | 22.073 | -11.393 | 18.458 | 1.00 | 28.54 |
| ATOM | 1095 | O   | LEU | 1600 | 21.578 | -10.613 | 17.648 | 1.00 | 25.59 |
| ATOM | 1096 | N   | VAL | 1601 | 22.377 | -12.645 | 18.134 | 1.00 | 29.13 |
| ATOM | 1098 | CA  | VAL | 1601 | 22.111 | -13.154 | 16.793 | 1.00 | 29.74 |
| ATOM | 1099 | CB  | VAL | 1601 | 22.780 | -14.513 | 16.551 | 1.00 | 29.63 |
| ATOM | 1100 | CG1 | VAL | 1601 | 22.615 | -14.922 | 15.105 | 1.00 | 29.30 |
| ATOM | 1101 | CG2 | VAL | 1601 | 24.259 | -14.422 | 16.873 | 1.00 | 28.52 |
| ATOM | 1102 | C   | VAL | 1601 | 20.591 | -13.247 | 16.564 | 1.00 | 29.98 |
| ATOM | 1103 | O   | VAL | 1601 | 20.106 | -13.040 | 15.452 | 1.00 | 29.73 |
| ATOM | 1104 | N   | SER | 1602 | 19.855 | -13.493 | 17.645 | 1.00 | 30.97 |
| ATOM | 1106 | CA  | SER | 1602 | 18.399 | -13.576 | 17.607 | 1.00 | 29.64 |
| ATOM | 1107 | CB  | SER | 1602 | 17.894 | -14.141 | 18.925 | 1.00 | 30.45 |
| ATOM | 1108 | OG  | SER | 1602 | 16.483 | -14.158 | 18.962 | 1.00 | 39.63 |
| ATOM | 1110 | C   | SER | 1602 | 17.784 | -12.192 | 17.343 | 1.00 | 29.30 |
| ATOM | 1111 | O   | SER | 1602 | 16.772 | -12.071 | 16.641 | 1.00 | 28.74 |
| ATOM | 1112 | N   | CYS | 1603 | 18.385 | -11.157 | 17.925 | 1.00 | 27.68 |
| ATOM | 1114 | CA  | CYS | 1603 | 17.931 | -9.783  | 17.717 | 1.00 | 27.32 |
| ATOM | 1115 | CB  | CYS | 1603 | 18.791 | -8.790  | 18.516 | 1.00 | 25.40 |
| ATOM | 1116 | SG  | CYS | 1603 | 18.472 | -7.039  | 18.177 | 0.50 | 20.76 |
| ATOM | 1117 | C   | CYS | 1603 | 18.057 | -9.468  | 16.225 | 1.00 | 28.34 |
| ATOM | 1118 | O   | CYS | 1603 | 17.134 | -8.926  | 15.629 | 1.00 | 29.70 |
| ATOM | 1119 | N   | ALA | 1604 | 19.192 | -9.837  | 15.627 | 1.00 | 29.36 |

PRT1

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1121 | CA  | ALA | 1604 | 19.438 | -9.601  | 14.195 | 1.00 | 28.78 |
| ATOM | 1122 | CB  | ALA | 1604 | 20.861 | -10.066 | 13.808 | 1.00 | 22.61 |
| ATOM | 1123 | C   | ALA | 1604 | 18.386 | -10.304 | 13.324 | 1.00 | 30.14 |
| ATOM | 1124 | O   | ALA | 1604 | 17.792 | -9.690  | 12.426 | 1.00 | 31.64 |
| ATOM | 1125 | N   | TYR | 1605 | 18.156 | -11.587 | 13.605 | 1.00 | 29.84 |
| ATOM | 1127 | CA  | TYR | 1605 | 17.179 | -12.392 | 12.874 | 1.00 | 28.26 |
| ATOM | 1128 | CB  | TYR | 1605 | 17.107 | -13.789 | 13.488 | 1.00 | 28.74 |
| ATOM | 1129 | CG  | TYR | 1605 | 16.018 | -14.673 | 12.912 | 1.00 | 31.12 |
| ATOM | 1130 | CD1 | TYR | 1605 | 16.152 | -15.256 | 11.650 | 1.00 | 32.53 |
| ATOM | 1131 | CE1 | TYR | 1605 | 15.144 | -16.067 | 11.121 | 1.00 | 30.84 |
| ATOM | 1132 | CD2 | TYR | 1605 | 14.853 | -14.926 | 13.634 | 1.00 | 31.21 |
| ATOM | 1133 | CE2 | TYR | 1605 | 13.850 | -15.734 | 13.116 | 1.00 | 29.69 |
| ATOM | 1134 | CZ  | TYR | 1605 | 14.002 | -16.296 | 11.864 | 1.00 | 30.82 |
| ATOM | 1135 | OH  | TYR | 1605 | 12.990 | -17.069 | 11.359 | 1.00 | 33.77 |
| ATOM | 1137 | C   | TYR | 1605 | 15.788 | -11.758 | 12.853 | 1.00 | 27.33 |
| ATOM | 1138 | O   | TYR | 1605 | 15.152 | -11.691 | 11.805 | 1.00 | 27.94 |
| ATOM | 1139 | N   | GLN | 1606 | 15.323 | -11.292 | 14.007 | 1.00 | 27.93 |
| ATOM | 1141 | CA  | GLN | 1606 | 14.008 | -10.659 | 14.115 | 1.00 | 27.20 |
| ATOM | 1142 | CB  | GLN | 1606 | 13.686 | -10.335 | 15.570 | 1.00 | 26.40 |
| ATOM | 1143 | CG  | GLN | 1606 | 13.301 | -11.556 | 16.402 | 1.00 | 28.12 |
| ATOM | 1144 | CD  | GLN | 1606 | 13.114 | -11.215 | 17.865 | 1.00 | 30.41 |
| ATOM | 1145 | OE1 | GLN | 1606 | 12.188 | -10.489 | 18.234 | 1.00 | 34.34 |
| ATOM | 1146 | NE2 | GLN | 1606 | 14.008 | -11.701 | 18.700 | 1.00 | 31.44 |
| ATOM | 1149 | C   | GLN | 1606 | 13.906 | -9.397  | 13.275 | 1.00 | 29.67 |
| ATOM | 1150 | O   | GLN | 1606 | 12.884 | -9.148  | 12.622 | 1.00 | 30.74 |
| ATOM | 1151 | N   | VAL | 1607 | 14.970 | -8.602  | 13.281 | 1.00 | 29.59 |
| ATOM | 1153 | CA  | VAL | 1607 | 14.996 | -7.377  | 12.501 | 1.00 | 27.06 |
| ATOM | 1154 | CB  | VAL | 1607 | 16.235 | -6.544  | 12.842 | 1.00 | 27.20 |
| ATOM | 1155 | CG1 | VAL | 1607 | 16.382 | -5.397  | 11.859 | 1.00 | 28.11 |
| ATOM | 1156 | CG2 | VAL | 1607 | 16.113 | -5.996  | 14.266 | 1.00 | 24.79 |
| ATOM | 1157 | C   | VAL | 1607 | 14.966 | -7.725  | 11.014 | 1.00 | 28.02 |
| ATOM | 1158 | O   | VAL | 1607 | 14.229 | -7.108  | 10.241 | 1.00 | 28.28 |
| ATOM | 1159 | N   | ALA | 1608 | 15.736 | -8.741  | 10.626 | 1.00 | 27.56 |
| ATOM | 1161 | CA  | ALA | 1608 | 15.787 | -9.206  | 9.236  | 1.00 | 27.36 |
| ATOM | 1162 | CB  | ALA | 1608 | 16.801 | -10.339 | 9.095  | 1.00 | 26.25 |
| ATOM | 1163 | C   | ALA | 1608 | 14.402 | -9.674  | 8.779  | 1.00 | 28.58 |
| ATOM | 1164 | O   | ALA | 1608 | 14.013 | -9.446  | 7.624  | 1.00 | 29.11 |
| ATOM | 1165 | N   | ARG | 1609 | 13.660 | -10.326 | 9.680  | 1.00 | 28.88 |
| ATOM | 1167 | CA  | ARG | 1609 | 12.306 | -10.797 | 9.376  | 1.00 | 27.17 |
| ATOM | 1168 | CB  | ARG | 1609 | 11.797 | -11.731 | 10.464 | 1.00 | 29.68 |
| ATOM | 1169 | CG  | ARG | 1609 | 12.458 | -13.062 | 10.439 | 1.00 | 31.65 |
| ATOM | 1170 | CD  | ARG | 1609 | 11.612 | -14.049 | 11.177 | 1.00 | 38.21 |
| ATOM | 1171 | NE  | ARG | 1609 | 10.856 | -14.897 | 10.269 | 1.00 | 41.10 |
| ATOM | 1173 | CZ  | ARG | 1609 | 10.048 | -15.872 | 10.667 | 1.00 | 41.97 |
| ATOM | 1174 | NH1 | ARG | 1609 | 9.886  | -16.125 | 11.959 | 1.00 | 40.69 |
| ATOM | 1177 | NH2 | ARG | 1609 | 9.411  | -16.609 | 9.770  | 1.00 | 43.57 |
| ATOM | 1180 | C   | ARG | 1609 | 11.312 | -9.654  | 9.183  | 1.00 | 25.38 |
| ATOM | 1181 | O   | ARG | 1609 | 10.480 | -9.693  | 8.260  | 1.00 | 25.75 |
| ATOM | 1182 | N   | GLY | 1610 | 11.365 | -8.661  | 10.070 | 1.00 | 24.03 |
| ATOM | 1184 | CA  | GLY | 1610 | 10.480 | -7.517  | 9.939  | 1.00 | 21.74 |
| ATOM | 1185 | C   | GLY | 1610 | 10.734 | -6.864  | 8.592  | 1.00 | 23.32 |
| ATOM | 1186 | O   | GLY | 1610 | 9.805  | -6.540  | 7.850  | 1.00 | 23.39 |
| ATOM | 1187 | N   | MET | 1611 | 12.016 | -6.714  | 8.265  | 1.00 | 24.48 |
| ATOM | 1189 | CA  | MET | 1611 | 12.453 | -6.125  | 7.002  | 1.00 | 23.13 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1190 | CB  | MET | 1611 | 13.949 | -5.860  | 7.035  | 1.00 | 19.46 |
| ATOM | 1191 | CG  | MET | 1611 | 14.339 | -4.671  | 7.910  | 1.00 | 22.46 |
| ATOM | 1192 | SD  | MET | 1611 | 13.457 | -3.123  | 7.536  | 1.00 | 25.27 |
| ATOM | 1193 | CE  | MET | 1611 | 13.900 | -2.801  | 5.876  | 1.00 | 22.25 |
| ATOM | 1194 | C   | MET | 1611 | 12.100 | -7.005  | 5.811  | 1.00 | 24.87 |
| ATOM | 1195 | O   | MET | 1611 | 11.699 | -6.497  | 4.755  | 1.00 | 24.09 |
| ATOM | 1196 | N   | GLU | 1612 | 12.230 | -8.321  | 5.975  | 1.00 | 25.48 |
| ATOM | 1198 | CA  | GLU | 1612 | 11.894 | -9.232  | 4.890  | 1.00 | 25.42 |
| ATOM | 1199 | CB  | GLU | 1612 | 12.155 | -10.691 | 5.288  | 1.00 | 23.41 |
| ATOM | 1200 | CG  | GLU | 1612 | 11.664 | -11.679 | 4.232  | 1.00 | 25.14 |
| ATOM | 1201 | CD  | GLU | 1612 | 11.872 | -13.141 | 4.599  | 1.00 | 28.60 |
| ATOM | 1202 | OE1 | GLU | 1612 | 11.637 | -13.514 | 5.777  | 1.00 | 30.10 |
| ATOM | 1203 | OE2 | GLU | 1612 | 12.244 | -13.928 | 3.694  | 1.00 | 29.53 |
| ATOM | 1204 | C   | GLU | 1612 | 10.418 | -9.021  | 4.521  | 1.00 | 26.92 |
| ATOM | 1205 | O   | GLU | 1612 | 10.065 | -8.928  | 3.343  | 1.00 | 29.61 |
| ATOM | 1206 | N   | TYR | 1613 | 9.576  | -8.884  | 5.542  | 1.00 | 27.88 |
| ATOM | 1208 | CA  | TYR | 1613 | 8.154  | -8.675  | 5.337  | 1.00 | 23.82 |
| ATOM | 1209 | CB  | TYR | 1613 | 7.415  | -8.769  | 6.667  | 1.00 | 24.17 |
| ATOM | 1210 | CG  | TYR | 1613 | 5.941  | -8.492  | 6.545  | 1.00 | 23.73 |
| ATOM | 1211 | CD1 | TYR | 1613 | 5.064  | -9.483  | 6.096  | 1.00 | 22.17 |
| ATOM | 1212 | CE1 | TYR | 1613 | 3.698  | -9.235  | 5.965  | 1.00 | 21.08 |
| ATOM | 1213 | CD2 | TYR | 1613 | 5.419  | -7.237  | 6.865  | 1.00 | 23.16 |
| ATOM | 1214 | CE2 | TYR | 1613 | 4.054  | -6.976  | 6.736  | 1.00 | 26.38 |
| ATOM | 1215 | CZ  | TYR | 1613 | 3.200  | -7.981  | 6.287  | 1.00 | 23.16 |
| ATOM | 1216 | OH  | TYR | 1613 | 1.855  | -7.725  | 6.149  | 1.00 | 25.50 |
| ATOM | 1218 | C   | TYR | 1613 | 7.885  | -7.327  | 4.670  | 1.00 | 23.17 |
| ATOM | 1219 | O   | TYR | 1613 | 7.147  | -7.246  | 3.689  | 1.00 | 24.21 |
| ATOM | 1220 | N   | LEU | 1614 | 8.481  | -6.266  | 5.206  | 1.00 | 23.04 |
| ATOM | 1222 | CA  | LEU | 1614 | 8.316  | -4.920  | 4.652  | 1.00 | 21.81 |
| ATOM | 1223 | CB  | LEU | 1614 | 9.107  | -3.906  | 5.484  | 1.00 | 19.94 |
| ATOM | 1224 | CG  | LEU | 1614 | 8.609  | -3.616  | 6.902  | 1.00 | 21.94 |
| ATOM | 1225 | CD1 | LEU | 1614 | 9.580  | -2.719  | 7.654  | 1.00 | 14.28 |
| ATOM | 1226 | CD2 | LEU | 1614 | 7.227  | -2.977  | 6.814  | 1.00 | 17.45 |
| ATOM | 1227 | C   | LEU | 1614 | 8.764  | -4.858  | 3.182  | 1.00 | 23.74 |
| ATOM | 1228 | O   | LEU | 1614 | 8.169  | -4.150  | 2.367  | 1.00 | 25.26 |
| ATOM | 1229 | N   | ALA | 1615 | 9.831  | -5.587  | 2.862  | 1.00 | 25.00 |
| ATOM | 1231 | CA  | ALA | 1615 | 10.357 | -5.644  | 1.502  | 1.00 | 23.04 |
| ATOM | 1232 | CB  | ALA | 1615 | 11.710 | -6.360  | 1.483  | 1.00 | 20.02 |
| ATOM | 1233 | C   | ALA | 1615 | 9.351  | -6.357  | 0.605  | 1.00 | 23.15 |
| ATOM | 1234 | O   | ALA | 1615 | 9.076  | -5.891  | -0.503 | 1.00 | 25.25 |
| ATOM | 1235 | N   | SER | 1616 | 8.754  | -7.441  | 1.104  | 1.00 | 23.64 |
| ATOM | 1237 | CA  | SER | 1616 | 7.758  | -8.199  | 0.337  | 1.00 | 23.60 |
| ATOM | 1238 | CB  | SER | 1616 | 7.346  | -9.453  | 1.107  | 1.00 | 22.46 |
| ATOM | 1239 | OG  | SER | 1616 | 6.531  | -9.131  | 2.224  | 1.00 | 26.66 |
| ATOM | 1241 | C   | SER | 1616 | 6.505  | -7.369  | 0.025  | 1.00 | 25.45 |
| ATOM | 1242 | O   | SER | 1616 | 5.813  | -7.607  | -0.967 | 1.00 | 26.67 |
| ATOM | 1243 | N   | LYS | 1617 | 6.193  | -6.436  | 0.916  | 1.00 | 25.47 |
| ATOM | 1245 | CA  | LYS | 1617 | 5.051  | -5.551  | 0.781  | 1.00 | 25.04 |
| ATOM | 1246 | CB  | LYS | 1617 | 4.513  | -5.183  | 2.163  | 1.00 | 26.30 |
| ATOM | 1247 | CG  | LYS | 1617 | 3.778  | -6.318  | 2.851  | 1.00 | 28.58 |
| ATOM | 1248 | CD  | LYS | 1617 | 2.438  | -6.530  | 2.169  | 1.00 | 33.00 |
| ATOM | 1249 | CE  | LYS | 1617 | 1.652  | -7.676  | 2.764  | 1.00 | 38.57 |
| ATOM | 1250 | NZ  | LYS | 1617 | 2.167  | -8.987  | 2.300  | 1.00 | 45.15 |
| ATOM | 1254 | C   | LYS | 1617 | 5.417  | -4.293  | 0.002  | 1.00 | 26.34 |

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|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1255 | O   | LYS | 1617 | 4.649  | -3.336 | -0.034 | 1.00 | 26.77 |
| ATOM | 1256 | N   | LYS | 1618 | 6.592  | -4.319 | -0.632 | 1.00 | 27.17 |
| ATOM | 1258 | CA  | LYS | 1618 | 7.084  | -3.197 | -1.447 | 1.00 | 28.20 |
| ATOM | 1259 | CB  | LYS | 1618 | 6.053  | -2.819 | -2.528 | 1.00 | 28.42 |
| ATOM | 1260 | CG  | LYS | 1618 | 5.971  | -3.749 | -3.730 | 1.00 | 26.63 |
| ATOM | 1261 | CD  | LYS | 1618 | 5.573  | -5.163 | -3.364 | 1.00 | 30.45 |
| ATOM | 1262 | CE  | LYS | 1618 | 5.636  | -6.087 | -4.570 | 1.00 | 32.50 |
| ATOM | 1263 | NZ  | LYS | 1618 | 4.621  | -5.729 | -5.600 | 1.00 | 34.89 |
| ATOM | 1267 | C   | LYS | 1618 | 7.466  | -1.951 | -0.643 | 1.00 | 28.78 |
| ATOM | 1268 | O   | LYS | 1618 | 7.556  | -0.848 | -1.199 | 1.00 | 28.78 |
| ATOM | 1269 | N   | CYS | 1619 | 7.753  | -2.130 | 0.646  | 1.00 | 29.26 |
| ATOM | 1271 | CA  | CYS | 1619 | 8.111  | -1.022 | 1.522  | 1.00 | 28.32 |
| ATOM | 1272 | CB  | CYS | 1619 | 7.391  | -1.173 | 2.873  | 1.00 | 26.33 |
| ATOM | 1273 | SG  | CYS | 1619 | 7.754  | 0.105  | 4.136  | 1.00 | 27.82 |
| ATOM | 1274 | C   | CYS | 1619 | 9.622  | -0.841 | 1.728  | 1.00 | 29.15 |
| ATOM | 1275 | O   | CYS | 1619 | 10.336 | -1.786 | 2.072  | 1.00 | 29.55 |
| ATOM | 1276 | N   | ILE | 1620 | 10.096 | 0.378  | 1.457  | 1.00 | 29.39 |
| ATOM | 1278 | CA  | ILE | 1620 | 11.502 | 0.761  | 1.625  | 1.00 | 27.44 |
| ATOM | 1279 | CB  | ILE | 1620 | 12.030 | 1.543  | 0.381  | 1.00 | 25.37 |
| ATOM | 1280 | CG2 | ILE | 1620 | 13.521 | 1.806  | 0.506  | 1.00 | 19.80 |
| ATOM | 1281 | CG1 | ILE | 1620 | 11.767 | 0.764  | -0.913 | 1.00 | 25.40 |
| ATOM | 1282 | CD1 | ILE | 1620 | 12.100 | 1.557  | -2.164 | 1.00 | 27.51 |
| ATOM | 1283 | C   | ILE | 1620 | 11.553 | 1.686  | 2.855  | 1.00 | 26.56 |
| ATOM | 1284 | O   | ILE | 1620 | 11.011 | 2.792  | 2.833  | 1.00 | 26.68 |
| ATOM | 1285 | N   | HIS | 1621 | 12.193 | 1.210  | 3.916  | 1.00 | 26.31 |
| ATOM | 1287 | CA  | HIS | 1621 | 12.297 | 1.967  | 5.162  | 1.00 | 25.00 |
| ATOM | 1288 | CB  | HIS | 1621 | 13.081 | 1.174  | 6.210  | 1.00 | 23.08 |
| ATOM | 1289 | CG  | HIS | 1621 | 12.848 | 1.633  | 7.618  | 1.00 | 23.21 |
| ATOM | 1290 | CD2 | HIS | 1621 | 12.224 | 1.027  | 8.656  | 1.00 | 22.69 |
| ATOM | 1291 | ND1 | HIS | 1621 | 13.260 | 2.862  | 8.088  | 1.00 | 25.34 |
| ATOM | 1293 | CE1 | HIS | 1621 | 12.909 | 2.993  | 9.356  | 1.00 | 24.18 |
| ATOM | 1294 | NE2 | HIS | 1621 | 12.273 | 1.891  | 9.719  | 1.00 | 25.86 |
| ATOM | 1296 | C   | HIS | 1621 | 12.963 | 3.316  | 4.976  | 1.00 | 25.09 |
| ATOM | 1297 | O   | HIS | 1621 | 12.408 | 4.328  | 5.349  | 1.00 | 28.21 |
| ATOM | 1298 | N   | ARG | 1622 | 14.162 | 3.315  | 4.402  | 1.00 | 26.09 |
| ATOM | 1300 | CA  | ARG | 1622 | 14.976 | 4.520  | 4.183  | 1.00 | 26.50 |
| ATOM | 1301 | CB  | ARG | 1622 | 14.180 | 5.670  | 3.558  | 1.00 | 23.52 |
| ATOM | 1302 | CG  | ARG | 1622 | 13.673 | 5.326  | 2.202  | 1.00 | 23.81 |
| ATOM | 1303 | CD  | ARG | 1622 | 12.995 | 6.494  | 1.551  | 1.00 | 28.42 |
| ATOM | 1304 | NE  | ARG | 1622 | 12.677 | 6.170  | 0.180  | 1.00 | 32.52 |
| ATOM | 1306 | CZ  | ARG | 1622 | 11.623 | 5.455  | -0.197 | 1.00 | 32.34 |
| ATOM | 1307 | NH1 | ARG | 1622 | 10.774 | 4.994  | 0.711  | 1.00 | 30.07 |
| ATOM | 1310 | NH2 | ARG | 1622 | 11.460 | 5.138  | -1.489 | 1.00 | 28.30 |
| ATOM | 1313 | C   | ARG | 1622 | 15.740 | 4.993  | 5.423  | 1.00 | 26.31 |
| ATOM | 1314 | O   | ARG | 1622 | 16.698 | 5.757  | 5.313  | 1.00 | 26.19 |
| ATOM | 1315 | N   | ASP | 1623 | 15.379 | 4.495  | 6.596  | 1.00 | 27.41 |
| ATOM | 1317 | CA  | ASP | 1623 | 16.114 | 4.879  | 7.788  | 1.00 | 29.94 |
| ATOM | 1318 | CB  | ASP | 1623 | 15.562 | 6.155  | 8.430  | 1.00 | 34.83 |
| ATOM | 1319 | CG  | ASP | 1623 | 16.481 | 6.689  | 9.533  | 1.00 | 38.84 |
| ATOM | 1320 | OD1 | ASP | 1623 | 15.971 | 7.265  | 10.514 | 1.00 | 44.51 |
| ATOM | 1321 | OD2 | ASP | 1623 | 17.721 | 6.514  | 9.423  | 1.00 | 37.59 |
| ATOM | 1322 | C   | ASP | 1623 | 16.203 | 3.763  | 8.812  | 1.00 | 28.71 |
| ATOM | 1323 | O   | ASP | 1623 | 15.845 | 3.927  | 9.990  | 1.00 | 26.21 |
| ATOM | 1324 | N   | LEU | 1624 | 16.735 | 2.633  | 8.357  | 1.00 | 26.82 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1326 | CA  | LEU | 1624 | 16.905 | 1.469  | 9.216  | 1.00 | 25.91 |
| ATOM | 1327 | CB  | LEU | 1624 | 17.025 | 0.209  | 8.367  | 1.00 | 23.35 |
| ATOM | 1328 | CG  | LEU | 1624 | 17.089 | -1.107 | 9.127  | 1.00 | 21.09 |
| ATOM | 1329 | CD1 | LEU | 1624 | 15.824 | -1.303 | 10.009 | 1.00 | 14.44 |
| ATOM | 1330 | CD2 | LEU | 1624 | 17.282 | -2.215 | 8.101  | 1.00 | 18.30 |
| ATOM | 1331 | C   | LEU | 1624 | 18.136 | 1.640  | 10.105 | 1.00 | 24.93 |
| ATOM | 1332 | O   | LEU | 1624 | 19.235 | 1.897  | 9.611  | 1.00 | 25.58 |
| ATOM | 1333 | N   | ALA | 1625 | 17.912 | 1.557  | 11.416 | 1.00 | 26.30 |
| ATOM | 1335 | CA  | ALA | 1625 | 18.945 | 1.702  | 12.445 | 1.00 | 23.59 |
| ATOM | 1336 | CB  | ALA | 1625 | 19.271 | 3.174  | 12.654 | 1.00 | 15.82 |
| ATOM | 1337 | C   | ALA | 1625 | 18.351 | 1.116  | 13.732 | 1.00 | 23.64 |
| ATOM | 1338 | O   | ALA | 1625 | 17.135 | 0.928  | 13.825 | 1.00 | 26.66 |
| ATOM | 1339 | N   | ALA | 1626 | 19.197 | 0.815  | 14.712 | 1.00 | 21.59 |
| ATOM | 1341 | CA  | ALA | 1626 | 18.708 | 0.266  | 15.974 | 1.00 | 21.66 |
| ATOM | 1342 | CB  | ALA | 1626 | 19.860 | -0.179 | 16.838 | 1.00 | 22.97 |
| ATOM | 1343 | C   | ALA | 1626 | 17.835 | 1.272  | 16.731 | 1.00 | 24.98 |
| ATOM | 1344 | O   | ALA | 1626 | 17.072 | 0.891  | 17.620 | 1.00 | 26.84 |
| ATOM | 1345 | N   | ARG | 1627 | 17.978 | 2.558  | 16.409 | 1.00 | 24.55 |
| ATOM | 1347 | CA  | ARG | 1627 | 17.178 | 3.598  | 17.042 | 1.00 | 25.29 |
| ATOM | 1348 | CB  | ARG | 1627 | 17.699 | 4.983  | 16.673 | 1.00 | 26.66 |
| ATOM | 1349 | CG  | ARG | 1627 | 17.675 | 5.276  | 15.179 | 1.00 | 30.56 |
| ATOM | 1350 | CD  | ARG | 1627 | 18.033 | 6.715  | 14.902 | 1.00 | 34.97 |
| ATOM | 1351 | NE  | ARG | 1627 | 18.177 | 6.980  | 13.470 | 1.00 | 40.03 |
| ATOM | 1353 | CZ  | ARG | 1627 | 19.322 | 6.864  | 12.809 | 1.00 | 40.62 |
| ATOM | 1354 | NH1 | ARG | 1627 | 20.421 | 6.485  | 13.441 | 1.00 | 46.52 |
| ATOM | 1357 | NH2 | ARG | 1627 | 19.377 | 7.159  | 11.523 | 1.00 | 43.25 |
| ATOM | 1360 | C   | ARG | 1627 | 15.739 |        |        |      |       |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1394 | CG1 | VAL | 1631 | 12.995 | -5.469  | 23.243 | 1.00 | 23.92 |
| ATOM | 1395 | CG2 | VAL | 1631 | 14.197 | -3.714  | 21.895 | 1.00 | 24.26 |
| ATOM | 1396 | C   | VAL | 1631 | 10.450 | -3.773  | 22.885 | 1.00 | 32.64 |
| ATOM | 1397 | O   | VAL | 1631 | 10.198 | -2.821  | 23.643 | 1.00 | 33.01 |
| ATOM | 1398 | N   | THR | 1632 | 9.697  | -4.863  | 22.827 | 1.00 | 34.45 |
| ATOM | 1400 | CA  | THR | 1632 | 8.516  | -5.035  | 23.660 | 1.00 | 34.29 |
| ATOM | 1401 | CB  | THR | 1632 | 7.466  | -5.941  | 22.962 | 1.00 | 34.62 |
| ATOM | 1402 | OG1 | THR | 1632 | 7.965  | -7.288  | 22.881 | 1.00 | 34.40 |
| ATOM | 1404 | CG2 | THR | 1632 | 7.154  | -5.414  | 21.551 | 1.00 | 31.61 |
| ATOM | 1405 | C   | THR | 1632 | 8.896  | -5.678  | 24.989 | 1.00 | 35.41 |
| ATOM | 1406 | O   | THR | 1632 | 10.002 | -6.189  | 25.146 | 1.00 | 34.79 |
| ATOM | 1407 | N   | GLU | 1633 | 7.939  | -5.706  | 25.913 | 1.00 | 36.86 |
| ATOM | 1409 | CA  | GLU | 1633 | 8.156  | -6.298  | 27.224 | 1.00 | 37.27 |
| ATOM | 1410 | CB  | GLU | 1633 | 6.893  | -6.182  | 28.079 | 1.00 | 37.66 |
| ATOM | 1411 | CG  | GLU | 1633 | 7.031  | -6.718  | 29.514 | 1.00 | 44.43 |
| ATOM | 1412 | CD  | GLU | 1633 | 8.048  | -5.959  | 30.378 | 1.00 | 46.68 |
| ATOM | 1413 | OE1 | GLU | 1633 | 8.104  | -4.708  | 30.300 | 1.00 | 49.88 |
| ATOM | 1414 | OE2 | GLU | 1633 | 8.783  | -6.612  | 31.156 | 1.00 | 48.53 |
| ATOM | 1415 | C   | GLU | 1633 | 8.561  | -7.753  | 27.088 | 1.00 | 37.15 |
| ATOM | 1416 | O   | GLU | 1633 | 9.227  | -8.292  | 27.954 | 1.00 | 38.60 |
| ATOM | 1417 | N   | ASP | 1634 | 8.167  | -8.384  | 25.990 | 1.00 | 38.41 |
| ATOM | 1419 | CA  | ASP | 1634 | 8.505  | -9.787  | 25.770 | 1.00 | 38.86 |
| ATOM | 1420 | CB  | ASP | 1634 | 7.381  | -10.499 | 25.013 | 1.00 | 44.27 |
| ATOM | 1421 | CG  | ASP | 1634 | 6.022  | -10.349 | 25.690 | 1.00 | 50.18 |
| ATOM | 1422 | OD1 | ASP | 1634 | 5.726  | -11.141 | 26.617 | 1.00 | 52.07 |
| ATOM | 1423 | OD2 | ASP | 1634 | 5.253  | -9.439  | 25.295 | 1.00 | 50.17 |
| ATOM | 1424 | C   | ASP | 1634 | 9.804  | -9.947  | 25.007 | 1.00 | 36.23 |
| ATOM | 1425 | O   | ASP | 1634 | 10.141 | -11.049 | 24.608 | 1.00 | 35.82 |
| ATOM | 1426 | N   | ASN | 1635 | 10.528 | -8.851  | 24.799 | 1.00 | 36.51 |
| ATOM | 1428 | CA  | ASN | 1635 | 11.795 | -8.864  | 24.052 | 1.00 | 37.41 |
| ATOM | 1429 | CB  | ASN | 1635 | 12.801 | -9.842  | 24.678 | 1.00 | 38.49 |
| ATOM | 1430 | CG  | ASN | 1635 | 13.343 | -9.359  | 26.003 | 1.00 | 37.71 |
| ATOM | 1431 | OD1 | ASN | 1635 | 13.499 | -8.156  | 26.227 | 1.00 | 38.09 |
| ATOM | 1432 | ND2 | ASN | 1635 | 13.679 | -10.300 | 26.874 | 1.00 | 39.63 |
| ATOM | 1435 | C   | ASN | 1635 | 11.655 | -9.162  | 22.552 | 1.00 | 36.37 |
| ATOM | 1436 | O   | ASN | 1635 | 12.522 | -9.811  | 21.944 | 1.00 | 36.41 |
| ATOM | 1437 | N   | VAL | 1636 | 10.547 | -8.721  | 21.966 | 1.00 | 33.79 |
| ATOM | 1439 | CA  | VAL | 1636 | 10.315 | -8.910  | 20.543 | 1.00 | 30.59 |
| ATOM | 1440 | CB  | VAL | 1636 | 8.820  | -9.139  | 20.218 | 1.00 | 28.83 |
| ATOM | 1441 | CG1 | VAL | 1636 | 8.615  | -9.182  | 18.712 | 1.00 | 26.13 |
| ATOM | 1442 | CG2 | VAL | 1636 | 8.339  | -10.431 | 20.838 | 1.00 | 25.67 |
| ATOM | 1443 | C   | VAL | 1636 | 10.782 | -7.630  | 19.863 | 1.00 | 30.18 |
| ATOM | 1444 | O   | VAL | 1636 | 10.436 | -6.527  | 20.301 | 1.00 | 27.86 |
| ATOM | 1445 | N   | MET | 1637 | 11.609 | -7.792  | 18.832 | 1.00 | 30.93 |
| ATOM | 1447 | CA  | MET | 1637 | 12.140 | -6.679  | 18.060 | 1.00 | 28.34 |
| ATOM | 1448 | CB  | MET | 1637 | 13.397 | -7.138  | 17.330 | 1.00 | 30.84 |
| ATOM | 1449 | CG  | MET | 1637 | 14.480 | -7.693  | 18.254 | 1.00 | 30.73 |
| ATOM | 1450 | SD  | MET | 1637 | 15.050 | -6.490  | 19.477 | 1.00 | 32.20 |
| ATOM | 1451 | CE  | MET | 1637 | 15.074 | -7.500  | 20.938 | 1.00 | 28.71 |
| ATOM | 1452 | C   | MET | 1637 | 11.082 | -6.264  | 17.051 | 1.00 | 27.29 |
| ATOM | 1453 | O   | MET | 1637 | 10.587 | -7.099  | 16.297 | 1.00 | 27.32 |
| ATOM | 1454 | N   | LYS | 1638 | 10.733 | -4.983  | 17.045 | 1.00 | 27.19 |
| ATOM | 1456 | CA  | LYS | 1638 | 9.716  | -4.450  | 16.143 | 1.00 | 26.38 |
| ATOM | 1457 | CB  | LYS | 1638 | 8.437  | -4.120  | 16.912 | 1.00 | 27.09 |



|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1458 | CG  | LYS | 1638 | 7.702  | -5.351 | 17.407 | 1.00 | 29.71 |
| ATOM | 1459 | CD  | LYS | 1638 | 6.386  | -5.018 | 18.109 | 1.00 | 31.48 |
| ATOM | 1460 | CE  | LYS | 1638 | 5.485  | -6.263 | 18.202 | 1.00 | 27.09 |
| ATOM | 1461 | NZ  | LYS | 1638 | 4.888  | -6.561 | 16.869 | 1.00 | 26.68 |
| ATOM | 1465 | C   | LYS | 1638 | 10.196 | -3.208 | 15.416 | 1.00 | 26.56 |
| ATOM | 1466 | O   | LYS | 1638 | 10.514 | -2.194 | 16.040 | 1.00 | 27.40 |
| ATOM | 1467 | N   | ILE | 1639 | 10.211 | -3.271 | 14.092 | 1.00 | 24.31 |
| ATOM | 1469 | CA  | ILE | 1639 | 10.649 | -2.147 | 13.289 | 1.00 | 24.84 |
| ATOM | 1470 | CB  | ILE | 1639 | 10.924 | -2.588 | 11.836 | 1.00 | 25.81 |
| ATOM | 1471 | CG2 | ILE | 1639 | 11.248 | -1.395 | 10.952 | 1.00 | 24.18 |
| ATOM | 1472 | CG1 | ILE | 1639 | 12.094 | -3.566 | 11.826 | 1.00 | 25.01 |
| ATOM | 1473 | CD1 | ILE | 1639 | 12.075 | -4.499 | 10.675 | 1.00 | 27.90 |
| ATOM | 1474 | C   | ILE | 1639 | 9.641  | -0.999 | 13.348 | 1.00 | 24.90 |
| ATOM | 1475 | O   | ILE | 1639 | 8.435  | -1.186 | 13.170 | 1.00 | 25.24 |
| ATOM | 1476 | N   | ALA | 1640 | 10.167 | 0.183  | 13.635 | 1.00 | 25.70 |
| ATOM | 1478 | CA  | ALA | 1640 | 9.378  | 1.392  | 13.744 | 1.00 | 27.61 |
| ATOM | 1479 | CB  | ALA | 1640 | 9.699  | 2.094  | 15.070 | 1.00 | 26.37 |
| ATOM | 1480 | C   | ALA | 1640 | 9.637  | 2.348  | 12.576 | 1.00 | 28.35 |
| ATOM | 1481 | O   | ALA | 1640 | 10.650 | 2.243  | 11.871 | 1.00 | 28.40 |
| ATOM | 1482 | N   | ASP | 1641 | 8.676  | 3.237  | 12.354 | 1.00 | 29.74 |
| ATOM | 1484 | CA  | ASP | 1641 | 8.760  | 4.272  | 11.325 | 1.00 | 32.13 |
| ATOM | 1485 | CB  | ASP | 1641 | 9.873  | 5.273  | 11.688 | 1.00 | 34.31 |
| ATOM | 1486 | CG  | ASP | 1641 | 9.507  | 6.158  | 12.896 | 1.00 | 36.31 |
| ATOM | 1487 | OD1 | ASP | 1641 | 10.299 | 7.056  | 13.258 | 1.00 | 42.18 |
| ATOM | 1488 | OD2 | ASP | 1641 | 8.420  | 5.974  | 13.483 | 1.00 | 41.03 |
| ATOM | 1489 | C   | ASP | 1641 | 8.882  | 3.840  | 9.867  | 1.00 | 32.00 |
| ATOM | 1490 | O   | ASP | 1641 | 9.339  | 4.617  | 9.021  | 1.00 | 32.65 |
| ATOM | 1491 | N   | PHE | 1642 | 8.415  | 2.634  | 9.563  | 1.00 | 30.61 |
| ATOM | 1493 | CA  | PHE | 1642 | 8.473  | 2.119  | 8.200  | 1.00 | 30.06 |
| ATOM | 1494 | CB  | PHE | 1642 | 8.248  | 0.606  | 8.189  | 1.00 | 24.46 |
| ATOM | 1495 | CG  | PHE | 1642 | 6.981  | 0.176  | 8.854  | 1.00 | 23.26 |
| ATOM | 1496 | CD1 | PHE | 1642 | 5.799  | 0.075  | 8.125  | 1.00 | 19.66 |
| ATOM | 1497 | CD2 | PHE | 1642 | 6.966  | -0.134 | 10.209 | 1.00 | 22.88 |
| ATOM | 1498 | CE1 | PHE | 1642 | 4.609  | -0.331 | 8.734  | 1.00 | 20.97 |
| ATOM | 1499 | CE2 | PHE | 1642 | 5.785  | -0.540 | 10.830 | 1.00 | 26.61 |
| ATOM | 1500 | CZ  | PHE | 1642 | 4.599  | -0.639 | 10.083 | 1.00 | 24.82 |
| ATOM | 1501 | C   | PHE | 1642 | 7.512  | 2.830  | 7.225  | 1.00 | 33.14 |
| ATOM | 1502 | O   | PHE | 1642 | 7.791  | 2.922  | 6.029  | 1.00 | 36.48 |
| ATOM | 1503 | N   | GLY | 1643 | 6.411  | 3.372  | 7.741  | 1.00 | 32.65 |
| ATOM | 1505 | CA  | GLY | 1643 | 5.462  | 4.059  | 6.876  | 1.00 | 32.28 |
| ATOM | 1506 | C   | GLY | 1643 | 5.629  | 5.560  | 6.913  | 1.00 | 32.19 |
| ATOM | 1507 | O   | GLY | 1643 | 4.795  | 6.310  | 6.415  | 1.00 | 30.74 |
| ATOM | 1508 | N   | LEU | 1644 | 6.739  | 5.997  | 7.486  | 1.00 | 36.80 |
| ATOM | 1510 | CA  | LEU | 1644 | 7.052  | 7.406  | 7.630  | 1.00 | 41.95 |
| ATOM | 1511 | CB  | LEU | 1644 | 8.332  | 7.551  | 8.439  | 1.00 | 37.41 |
| ATOM | 1512 | CG  | LEU | 1644 | 8.377  | 8.746  | 9.369  | 1.00 | 38.98 |
| ATOM | 1513 | CD1 | LEU | 1644 | 7.384  | 8.548  | 10.493 | 1.00 | 40.45 |
| ATOM | 1514 | CD2 | LEU | 1644 | 9.775  | 8.904  | 9.929  | 1.00 | 41.94 |
| ATOM | 1515 | C   | LEU | 1644 | 7.189  | 8.150  | 6.296  | 1.00 | 47.55 |
| ATOM | 1516 | O   | LEU | 1644 | 7.787  | 7.648  | 5.341  | 1.00 | 50.55 |
| ATOM | 1517 | N   | ALA | 1645 | 6.637  | 9.356  | 6.247  | 1.00 | 52.59 |
| ATOM | 1519 | CA  | ALA | 1645 | 6.686  | 10.194 | 5.055  | 1.00 | 56.88 |
| ATOM | 1520 | CB  | ALA | 1645 | 5.391  | 10.999 | 4.942  | 1.00 | 58.01 |
| ATOM | 1521 | C   | ALA | 1645 | 7.880  | 11.135 | 5.178  | 1.00 | 58.95 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1522 | O   | ALA | 1645 | 8.064  | 11.770 | 6.224  | 1.00 | 59.37 |
| ATOM | 1523 | N   | ARG | 1646 | 8.700  | 11.211 | 4.133  | 1.00 | 60.26 |
| ATOM | 1525 | CA  | ARG | 1646 | 9.870  | 12.088 | 4.165  | 1.00 | 63.04 |
| ATOM | 1526 | CB  | ARG | 1646 | 10.995 | 11.444 | 4.976  | 1.00 | 64.92 |
| ATOM | 1527 | C   | ARG | 1646 | 10.377 | 12.461 | 2.782  | 1.00 | 63.84 |
| ATOM | 1528 | O   | ARG | 1646 | 10.361 | 11.641 | 1.864  | 1.00 | 63.55 |
| ATOM | 1529 | N   | ASP | 1647 | 10.801 | 13.714 | 2.633  | 1.00 | 65.18 |
| ATOM | 1531 | CA  | ASP | 1647 | 11.332 | 14.190 | 1.361  | 1.00 | 67.26 |
| ATOM | 1532 | CB  | ASP | 1647 | 10.989 | 15.670 | 1.150  | 1.00 | 68.92 |
| ATOM | 1533 | CG  | ASP | 1647 | 11.164 | 16.124 | -0.304 | 1.00 | 70.88 |
| ATOM | 1534 | OD1 | ASP | 1647 | 12.196 | 15.811 | -0.943 | 1.00 | 70.33 |
| ATOM | 1535 | OD2 | ASP | 1647 | 10.258 | 16.825 | -0.808 | 1.00 | 71.39 |
| ATOM | 1536 | C   | ASP | 1647 | 12.847 | 14.005 | 1.405  | 1.00 | 68.40 |
| ATOM | 1537 | O   | ASP | 1647 | 13.545 | 14.711 | 2.142  | 1.00 | 68.66 |
| ATOM | 1538 | N   | ILE | 1648 | 13.347 | 13.055 | 0.621  | 1.00 | 68.48 |
| ATOM | 1540 | CA  | ILE | 1648 | 14.777 | 12.773 | 0.570  | 1.00 | 69.00 |
| ATOM | 1541 | CB  | ILE | 1648 | 15.091 | 11.535 | -0.314 | 1.00 | 66.28 |
| ATOM | 1542 | CG2 | ILE | 1648 | 14.231 | 10.352 | 0.131  | 1.00 | 65.14 |
| ATOM | 1543 | CG1 | ILE | 1648 | 14.869 | 11.853 | -1.799 | 1.00 | 63.01 |
| ATOM | 1544 | CD1 | ILE | 1648 | 15.274 | 10.746 | -2.738 | 1.00 | 60.11 |
| ATOM | 1545 | C   | ILE | 1648 | 15.542 | 13.990 | 0.046  | 1.00 | 71.12 |
| ATOM | 1546 | O   | ILE | 1648 | 16.628 | 14.310 | 0.525  | 1.00 | 72.41 |
| ATOM | 1547 | N   | HIS | 1649 | 14.923 | 14.710 | -0.883 | 1.00 | 73.09 |
| ATOM | 1549 | CA  | HIS | 1649 | 15.546 | 15.890 | -1.469 | 1.00 | 74.66 |
| ATOM | 1550 | CB  | HIS | 1649 | 14.921 | 16.191 | -2.835 | 1.00 | 76.00 |
| ATOM | 1551 | CG  | HIS | 1649 | 15.178 | 15.157 | -3.867 | 1.00 | 78.03 |
| ATOM | 1552 | CD2 | HIS | 1649 | 16.314 | 14.425 | -4.151 | 1.00 | 78.85 |
| ATOM | 1553 | ND1 | HIS | 1649 | 14.245 | 14.739 | -4.795 | 1.00 | 78.49 |
| ATOM | 1555 | CE1 | HIS | 1649 | 14.765 | 13.835 | -5.584 | 1.00 | 78.94 |
| ATOM | 1556 | NE2 | HIS | 1649 | 16.005 | 13.623 | -5.226 | 1.00 | 78.22 |
| ATOM | 1558 | C   | HIS | 1649 | 15.466 | 17.108 | -0.549 | 1.00 | 75.04 |
| ATOM | 1559 | O   | HIS | 1649 | 15.567 | 18.244 | -1.007 | 1.00 | 75.49 |
| ATOM | 1560 | N   | HIS | 1650 | 15.265 | 16.860 | 0.743  | 1.00 | 76.11 |
| ATOM | 1562 | CA  | HIS | 1650 | 15.181 | 17.918 | 1.748  | 1.00 | 77.63 |
| ATOM | 1563 | CB  | HIS | 1650 | 13.723 | 18.327 | 1.995  | 1.00 | 81.10 |
| ATOM | 1564 | CG  | HIS | 1650 | 13.206 | 19.352 | 1.033  | 1.00 | 86.06 |
| ATOM | 1565 | CD2 | HIS | 1650 | 13.662 | 20.592 | 0.730  | 1.00 | 88.74 |
| ATOM | 1566 | ND1 | HIS | 1650 | 12.099 | 19.146 | 0.239  | 1.00 | 88.83 |
| ATOM | 1568 | CE1 | HIS | 1650 | 11.893 | 20.211 | -0.511 | 1.00 | 90.51 |
| ATOM | 1569 | NE2 | HIS | 1650 | 12.823 | 21.103 | -0.238 | 1.00 | 90.75 |
| ATOM | 1571 | C   | HIS | 1650 | 15.824 | 17.482 | 3.064  | 1.00 | 77.39 |
| ATOM | 1572 | O   | HIS | 1650 | 15.651 | 18.133 | 4.091  | 1.00 | 77.42 |
| ATOM | 1573 | N   | ILE | 1651 | 16.573 | 16.385 | 3.024  | 1.00 | 77.73 |
| ATOM | 1575 | CA  | ILE | 1651 | 17.241 | 15.864 | 4.212  | 1.00 | 77.02 |
| ATOM | 1576 | CB  | ILE | 1651 | 17.788 | 14.433 | 3.974  | 1.00 | 78.24 |
| ATOM | 1577 | CG2 | ILE | 1651 | 18.647 | 13.963 | 5.153  | 1.00 | 77.92 |
| ATOM | 1578 | CG1 | ILE | 1651 | 16.633 | 13.458 | 3.750  | 1.00 | 80.90 |
| ATOM | 1579 | CD1 | ILE | 1651 | 17.094 | 12.032 | 3.483  | 1.00 | 82.41 |
| ATOM | 1580 | C   | ILE | 1651 | 18.411 | 16.748 | 4.620  | 1.00 | 76.15 |
| ATOM | 1581 | O   | ILE | 1651 | 19.269 | 17.078 | 3.803  | 1.00 | 76.52 |
| ATOM | 1582 | N   | ASP | 1652 | 18.432 | 17.150 | 5.882  | 1.00 | 75.13 |
| ATOM | 1584 | CA  | ASP | 1652 | 19.527 | 17.957 | 6.384  | 1.00 | 73.91 |
| ATOM | 1585 | CB  | ASP | 1652 | 19.068 | 18.781 | 7.592  | 1.00 | 76.30 |
| ATOM | 1586 | CG  | ASP | 1652 | 20.216 | 19.499 | 8.286  | 1.00 | 79.91 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1587 | OD1 | ASP | 1652 | 21.247 | 19.786 | 7.636  | 1.00 | 82.38 |
| ATOM | 1588 | OD2 | ASP | 1652 | 20.081 | 19.780 | 9.497  | 1.00 | 81.51 |
| ATOM | 1589 | C   | ASP | 1652 | 20.637 | 16.984 | 6.783  | 1.00 | 72.31 |
| ATOM | 1590 | O   | ASP | 1652 | 20.599 | 16.403 | 7.866  | 1.00 | 71.41 |
| ATOM | 1591 | N   | TYR | 1653 | 21.610 | 16.805 | 5.894  | 1.00 | 71.44 |
| ATOM | 1593 | CA  | TYR | 1653 | 22.736 | 15.900 | 6.143  | 1.00 | 70.07 |
| ATOM | 1594 | CB  | TYR | 1653 | 23.655 | 15.849 | 4.921  | 1.00 | 66.96 |
| ATOM | 1595 | CG  | TYR | 1653 | 23.153 | 14.932 | 3.834  | 1.00 | 66.43 |
| ATOM | 1596 | CD1 | TYR | 1653 | 23.881 | 14.757 | 2.657  | 1.00 | 66.60 |
| ATOM | 1597 | CE1 | TYR | 1653 | 23.434 | 13.898 | 1.653  | 1.00 | 68.33 |
| ATOM | 1598 | CD2 | TYR | 1653 | 21.960 | 14.224 | 3.981  | 1.00 | 66.58 |
| ATOM | 1599 | CE2 | TYR | 1653 | 21.500 | 13.363 | 2.990  | 1.00 | 68.84 |
| ATOM | 1600 | CZ  | TYR | 1653 | 22.241 | 13.205 | 1.823  | 1.00 | 69.34 |
| ATOM | 1601 | OH  | TYR | 1653 | 21.781 | 12.360 | 0.833  | 1.00 | 69.88 |
| ATOM | 1603 | C   | TYR | 1653 | 23.557 | 16.227 | 7.391  | 1.00 | 70.80 |
| ATOM | 1604 | O   | TYR | 1653 | 24.197 | 15.351 | 7.975  | 1.00 | 70.62 |
| ATOM | 1605 | N   | TYR | 1654 | 23.531 | 17.488 | 7.802  | 1.00 | 70.76 |
| ATOM | 1607 | CA  | TYR | 1654 | 24.280 | 17.902 | 8.972  | 1.00 | 70.97 |
| ATOM | 1608 | CB  | TYR | 1654 | 24.795 | 19.328 | 8.783  | 1.00 | 69.27 |
| ATOM | 1609 | CG  | TYR | 1654 | 25.935 | 19.401 | 7.787  | 1.00 | 69.68 |
| ATOM | 1610 | CD1 | TYR | 1654 | 25.696 | 19.352 | 6.415  | 1.00 | 69.51 |
| ATOM | 1611 | CE1 | TYR | 1654 | 26.750 | 19.380 | 5.498  | 1.00 | 70.15 |
| ATOM | 1612 | CD2 | TYR | 1654 | 27.256 | 19.482 | 8.221  | 1.00 | 69.92 |
| ATOM | 1613 | CE2 | TYR | 1654 | 28.314 | 19.513 | 7.316  | 1.00 | 70.26 |
| ATOM | 1614 | CZ  | TYR | 1654 | 28.057 | 19.462 | 5.958  | 1.00 | 70.22 |
| ATOM | 1615 | OH  | TYR | 1654 | 29.111 | 19.492 | 5.069  | 1.00 | 69.67 |
| ATOM | 1617 | C   | TYR | 1654 | 23.503 | 17.763 | 10.272 | 1.00 | 72.19 |
| ATOM | 1618 | O   | TYR | 1654 | 24.035 | 18.043 | 11.344 | 1.00 | 73.21 |
| ATOM | 1619 | N   | LYS | 1655 | 22.269 | 17.275 | 10.183 | 1.00 | 73.05 |
| ATOM | 1621 | CA  | LYS | 1655 | 21.424 | 17.108 | 11.363 | 1.00 | 74.81 |
| ATOM | 1622 | CB  | LYS | 1655 | 19.955 | 17.124 | 10.953 | 1.00 | 75.63 |
| ATOM | 1623 | CG  | LYS | 1655 | 18.978 | 17.239 | 12.102 | 1.00 | 79.16 |
| ATOM | 1624 | CD  | LYS | 1655 | 17.581 | 17.513 | 11.576 | 1.00 | 84.09 |
| ATOM | 1625 | CE  | LYS | 1655 | 16.517 | 17.244 | 12.634 | 1.00 | 87.56 |
| ATOM | 1626 | NZ  | LYS | 1655 | 15.139 | 17.478 | 12.097 | 1.00 | 89.36 |
| ATOM | 1630 | C   | LYS | 1655 | 21.738 | 15.834 | 12.156 | 1.00 | 75.72 |
| ATOM | 1631 | O   | LYS | 1655 | 21.900 | 14.751 | 11.586 | 1.00 | 77.14 |
| ATOM | 1632 | N   | LYS | 1656 | 21.815 | 15.977 | 13.477 | 1.00 | 75.08 |
| ATOM | 1634 | CA  | LYS | 1656 | 22.106 | 14.857 | 14.363 | 1.00 | 73.36 |
| ATOM | 1635 | CB  | LYS | 1656 | 23.062 | 15.296 | 15.477 | 1.00 | 72.88 |
| ATOM | 1636 | CG  | LYS | 1656 | 24.475 | 15.599 | 15.007 | 1.00 | 72.87 |
| ATOM | 1637 | CD  | LYS | 1656 | 25.346 | 16.048 | 16.167 | 1.00 | 74.66 |
| ATOM | 1638 | CE  | LYS | 1656 | 26.830 | 15.945 | 15.828 | 1.00 | 74.84 |
| ATOM | 1639 | NZ  | LYS | 1656 | 27.701 | 16.322 | 16.981 | 1.00 | 73.74 |
| ATOM | 1643 | C   | LYS | 1656 | 20.827 | 14.311 | 14.982 | 1.00 | 72.45 |
| ATOM | 1644 | O   | LYS | 1656 | 19.795 | 14.991 | 15.007 | 1.00 | 72.74 |
| ATOM | 1645 | N   | THR | 1657 | 20.900 | 13.075 | 15.469 | 1.00 | 71.26 |
| ATOM | 1647 | CA  | THR | 1657 | 19.763 | 12.426 | 16.107 | 1.00 | 70.05 |
| ATOM | 1648 | CB  | THR | 1657 | 19.969 | 10.886 | 16.206 | 1.00 | 68.30 |
| ATOM | 1649 | OG1 | THR | 1657 | 21.084 | 10.598 | 17.060 | 1.00 | 69.34 |
| ATOM | 1651 | CG2 | THR | 1657 | 20.244 | 10.292 | 14.839 | 1.00 | 66.16 |
| ATOM | 1652 | C   | THR | 1657 | 19.707 | 13.019 | 17.504 | 1.00 | 70.37 |
| ATOM | 1653 | O   | THR | 1657 | 20.608 | 13.761 | 17.892 | 1.00 | 71.47 |
| ATOM | 1654 | N   | THR | 1658 | 18.669 | 12.691 | 18.263 | 1.00 | 70.80 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1656 | CA  | THR | 1658 | 18.559 | 13.205 | 19.626 | 1.00 | 71.54 |
| ATOM | 1657 | CB  | THR | 1658 | 17.334 | 12.600 | 20.325 | 1.00 | 71.20 |
| ATOM | 1658 | C   | THR | 1658 | 19.844 | 12.865 | 20.394 | 1.00 | 70.91 |
| ATOM | 1659 | O   | THR | 1658 | 20.429 | 13.722 | 21.063 | 1.00 | 71.25 |
| ATOM | 1660 | N   | ASN | 1659 | 20.331 | 11.639 | 20.199 | 1.00 | 68.87 |
| ATOM | 1662 | CA  | ASN | 1659 | 21.537 | 11.157 | 20.871 | 1.00 | 65.52 |
| ATOM | 1663 | CB  | ASN | 1659 | 21.602 | 9.635  | 20.796 | 1.00 | 67.39 |
| ATOM | 1664 | CG  | ASN | 1659 | 22.419 | 9.032  | 21.916 | 1.00 | 69.42 |
| ATOM | 1665 | OD1 | ASN | 1659 | 22.261 | 9.410  | 23.076 | 1.00 | 71.70 |
| ATOM | 1666 | ND2 | ASN | 1659 | 23.278 | 8.069  | 21.583 | 1.00 | 68.93 |
| ATOM | 1669 | C   | ASN | 1659 | 22.830 | 11.749 | 20.318 | 1.00 | 62.51 |
| ATOM | 1670 | O   | ASN | 1659 | 23.917 | 11.351 | 20.733 | 1.00 | 61.47 |
| ATOM | 1671 | N   | GLY | 1660 | 22.706 | 12.654 | 19.348 | 1.00 | 59.76 |
| ATOM | 1673 | CA  | GLY | 1660 | 23.859 | 13.307 | 18.750 | 1.00 | 57.70 |
| ATOM | 1674 | C   | GLY | 1660 | 24.553 | 12.593 | 17.597 | 1.00 | 56.98 |
| ATOM | 1675 | O   | GLY | 1660 | 25.659 | 12.979 | 17.199 | 1.00 | 57.55 |
| ATOM | 1676 | N   | ARG | 1661 | 23.909 | 11.573 | 17.037 | 1.00 | 55.34 |
| ATOM | 1678 | CA  | ARG | 1661 | 24.504 | 10.826 | 15.928 | 1.00 | 52.28 |
| ATOM | 1679 | CB  | ARG | 1661 | 24.255 | 9.334  | 16.092 | 1.00 | 50.68 |
| ATOM | 1680 | CG  | ARG | 1661 | 24.811 | 8.744  | 17.365 | 1.00 | 49.61 |
| ATOM | 1681 | CD  | ARG | 1661 | 24.542 | 7.267  | 17.361 | 1.00 | 52.30 |
| ATOM | 1682 | NE  | ARG | 1661 | 24.942 | 6.599  | 18.595 | 1.00 | 53.64 |
| ATOM | 1684 | CZ  | ARG | 1661 | 24.731 | 5.306  | 18.826 | 1.00 | 56.32 |
| ATOM | 1685 | NH1 | ARG | 1661 | 24.124 | 4.559  | 17.901 | 1.00 | 54.04 |
| ATOM | 1688 | NH2 | ARG | 1661 | 25.145 | 4.754  | 19.965 | 1.00 | 54.48 |
| ATOM | 1691 | C   | ARG | 1661 | 24.015 | 11.288 | 14.560 | 1.00 | 49.89 |
| ATOM | 1692 | O   | ARG | 1661 | 22.916 | 11.812 | 14.429 | 1.00 | 51.43 |
| ATOM | 1693 | N   | LEU | 1662 | 24.839 | 11.080 | 13.542 | 1.00 | 45.78 |
| ATOM | 1695 | CA  | LEU | 1662 | 24.503 | 11.481 | 12.186 | 1.00 | 43.05 |
| ATOM | 1696 | CB  | LEU | 1662 | 25.762 | 12.020 | 11.492 | 1.00 | 42.15 |
| ATOM | 1697 | CG  | LEU | 1662 | 26.351 | 13.306 | 12.088 | 1.00 | 40.60 |
| ATOM | 1698 | CD1 | LEU | 1662 | 27.780 | 13.512 | 11.641 | 1.00 | 38.14 |
| ATOM | 1699 | CD2 | LEU | 1662 | 25.484 | 14.499 | 11.705 | 1.00 | 42.00 |
| ATOM | 1700 | C   | LEU | 1662 | 23.867 | 10.346 | 11.370 | 1.00 | 41.81 |
| ATOM | 1701 | O   | LEU | 1662 | 24.548 | 9.406  | 10.957 | 1.00 | 40.46 |
| ATOM | 1702 | N   | PRO | 1663 | 22.546 | 10.428 | 11.118 | 1.00 | 40.49 |
| ATOM | 1703 | CD  | PRO | 1663 | 21.659 | 11.519 | 11.561 | 1.00 | 40.60 |
| ATOM | 1704 | CA  | PRO | 1663 | 21.794 | 9.423  | 10.351 | 1.00 | 38.17 |
| ATOM | 1705 | CB  | PRO | 1663 | 20.433 | 10.095 | 10.158 | 1.00 | 38.43 |
| ATOM | 1706 | CG  | PRO | 1663 | 20.282 | 10.901 | 11.414 | 1.00 | 40.65 |
| ATOM | 1707 | C   | PRO | 1663 | 22.445 | 9.059  | 9.012  | 1.00 | 35.40 |
| ATOM | 1708 | O   | PRO | 1663 | 22.265 | 7.949  | 8.521  | 1.00 | 33.01 |
| ATOM | 1709 | N   | VAL | 1664 | 23.200 | 9.989  | 8.426  | 1.00 | 34.56 |
| ATOM | 1711 | CA  | VAL | 1664 | 23.889 | 9.722  | 7.160  | 1.00 | 32.91 |
| ATOM | 1712 | CB  | VAL | 1664 | 24.757 | 10.916 | 6.659  | 1.00 | 33.13 |
| ATOM | 1713 | CG1 | VAL | 1664 | 23.912 | 11.929 | 5.968  | 1.00 | 33.44 |
| ATOM | 1714 | CG2 | VAL | 1664 | 25.521 | 11.554 | 7.792  | 1.00 | 33.68 |
| ATOM | 1715 | C   | VAL | 1664 | 24.812 | 8.511  | 7.266  | 1.00 | 30.58 |
| ATOM | 1716 | O   | VAL | 1664 | 25.157 | 7.903  | 6.257  | 1.00 | 29.20 |
| ATOM | 1717 | N   | LYS | 1665 | 25.211 | 8.171  | 8.489  | 1.00 | 28.02 |
| ATOM | 1719 | CA  | LYS | 1665 | 26.102 | 7.044  | 8.726  | 1.00 | 24.95 |
| ATOM | 1720 | CB  | LYS | 1665 | 26.749 | 7.153  | 10.098 | 1.00 | 24.39 |
| ATOM | 1721 | CG  | LYS | 1665 | 27.811 | 8.231  | 10.140 | 1.00 | 28.36 |
| ATOM | 1722 | CD  | LYS | 1665 | 28.189 | 8.628  | 11.548 | 1.00 | 29.24 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1723 | CE  | LYS | 1665 | 29.269 | 9.690  | 11.489 | 1.00 | 31.15 |
| ATOM | 1724 | NZ  | LYS | 1665 | 29.639 | 10.194 | 12.836 | 1.00 | 35.47 |
| ATOM | 1728 | C   | LYS | 1665 | 25.440 | 5.692  | 8.543  | 1.00 | 25.16 |
| ATOM | 1729 | O   | LYS | 1665 | 26.096 | 4.671  | 8.627  | 1.00 | 24.34 |
| ATOM | 1730 | N   | TRP | 1666 | 24.138 | 5.698  | 8.286  | 1.00 | 25.16 |
| ATOM | 1732 | CA  | TRP | 1666 | 23.414 | 4.461  | 8.053  | 1.00 | 26.61 |
| ATOM | 1733 | CB  | TRP | 1666 | 22.157 | 4.412  | 8.917  | 1.00 | 28.17 |
| ATOM | 1734 | CG  | TRP | 1666 | 22.428 | 3.931  | 10.330 | 1.00 | 30.26 |
| ATOM | 1735 | CD2 | TRP | 1666 | 22.930 | 4.714  | 11.426 | 1.00 | 26.92 |
| ATOM | 1736 | CE2 | TRP | 1666 | 23.063 | 3.837  | 12.537 | 1.00 | 26.34 |
| ATOM | 1737 | CE3 | TRP | 1666 | 23.286 | 6.057  | 11.598 | 1.00 | 24.69 |
| ATOM | 1738 | CD1 | TRP | 1666 | 22.276 | 2.656  | 10.800 | 1.00 | 26.44 |
| ATOM | 1739 | NE1 | TRP | 1666 | 22.659 | 2.592  | 12.118 | 1.00 | 25.65 |
| ATOM | 1741 | CZ2 | TRP | 1666 | 23.535 | 4.264  | 13.779 | 1.00 | 24.97 |
| ATOM | 1742 | CZ3 | TRP | 1666 | 23.758 | 6.484  | 12.837 | 1.00 | 22.23 |
| ATOM | 1743 | CH2 | TRP | 1666 | 23.877 | 5.587  | 13.908 | 1.00 | 24.97 |
| ATOM | 1744 | C   | TRP | 1666 | 23.048 | 4.345  | 6.572  | 1.00 | 27.24 |
| ATOM | 1745 | O   | TRP | 1666 | 22.573 | 3.301  | 6.116  | 1.00 | 29.16 |
| ATOM | 1746 | N   | MET | 1667 | 23.355 | 5.390  | 5.811  | 1.00 | 26.70 |
| ATOM | 1748 | CA  | MET | 1667 | 23.022 | 5.444  | 4.398  | 1.00 | 25.21 |
| ATOM | 1749 | CB  | MET | 1667 | 22.828 | 6.893  | 3.963  | 1.00 | 28.81 |
| ATOM | 1750 | CG  | MET | 1667 | 21.704 | 7.630  | 4.637  | 1.00 | 35.42 |
| ATOM | 1751 | SD  | MET | 1667 | 21.567 | 9.283  | 3.924  | 1.00 | 42.64 |
| ATOM | 1752 | CE  | MET | 1667 | 20.959 | 8.858  | 2.369  | 1.00 | 41.32 |
| ATOM | 1753 | C   | MET | 1667 | 23.984 | 4.807  | 3.417  | 1.00 | 25.03 |
| ATOM | 1754 | O   | MET | 1667 | 25.182 | 5.047  | 3.446  | 1.00 | 24.24 |
| ATOM | 1755 | N   | ALA | 1668 | 23.420 | 4.034  | 2.501  | 1.00 | 26.70 |
| ATOM | 1757 | CA  | ALA | 1668 | 24.186 | 3.398  | 1.441  | 1.00 | 27.82 |
| ATOM | 1758 | CB  | ALA | 1668 | 23.272 | 2.509  | 0.601  | 1.00 | 25.36 |
| ATOM | 1759 | C   | ALA | 1668 | 24.738 | 4.528  | 0.575  | 1.00 | 28.42 |
| ATOM | 1760 | O   | ALA | 1668 | 24.044 | 5.521  | 0.321  | 1.00 | 27.52 |
| ATOM | 1761 | N   | PRO | 1669 | 25.972 | 4.374  | 0.065  | 1.00 | 28.95 |
| ATOM | 1762 | CD  | PRO | 1669 | 26.867 | 3.214  | 0.170  | 1.00 | 27.98 |
| ATOM | 1763 | CA  | PRO | 1669 | 26.571 | 5.418  | -0.775 | 1.00 | 28.76 |
| ATOM | 1764 | CB  | PRO | 1669 | 27.814 | 4.731  | -1.326 | 1.00 | 28.58 |
| ATOM | 1765 | CG  | PRO | 1669 | 28.193 | 3.809  | -0.209 | 1.00 | 30.22 |
| ATOM | 1766 | C   | PRO | 1669 | 25.647 | 5.909  | -1.893 | 1.00 | 27.08 |
| ATOM | 1767 | O   | PRO | 1669 | 25.496 | 7.107  | -2.093 | 1.00 | 28.31 |
| ATOM | 1768 | N   | GLU | 1670 | 24.993 | 4.997  | -2.595 | 1.00 | 25.42 |
| ATOM | 1770 | CA  | GLU | 1670 | 24.110 | 5.423  | -3.673 | 1.00 | 27.02 |
| ATOM | 1771 | CB  | GLU | 1670 | 23.680 | 4.233  | -4.542 | 1.00 | 27.18 |
| ATOM | 1772 | CG  | GLU | 1670 | 22.662 | 3.294  | -3.911 | 1.00 | 27.66 |
| ATOM | 1773 | CD  | GLU | 1670 | 23.280 | 2.162  | -3.112 | 1.00 | 27.75 |
| ATOM | 1774 | OE1 | GLU | 1670 | 22.488 | 1.309  | -2.647 | 1.00 | 27.12 |
| ATOM | 1775 | OE2 | GLU | 1670 | 24.526 | 2.114  | -2.944 | 1.00 | 21.64 |
| ATOM | 1776 | C   | GLU | 1670 | 22.896 | 6.229  | -3.189 | 1.00 | 26.88 |
| ATOM | 1777 | O   | GLU | 1670 | 22.348 | 7.037  | -3.929 | 1.00 | 24.52 |
| ATOM | 1778 | N   | ALA | 1671 | 22.477 | 6.009  | -1.948 | 1.00 | 29.43 |
| ATOM | 1780 | CA  | ALA | 1671 | 21.342 | 6.744  | -1.392 | 1.00 | 29.29 |
| ATOM | 1781 | CB  | ALA | 1671 | 20.751 | 5.989  | -0.217 | 1.00 | 26.98 |
| ATOM | 1782 | C   | ALA | 1671 | 21.826 | 8.124  | -0.939 | 1.00 | 31.14 |
| ATOM | 1783 | O   | ALA | 1671 | 21.159 | 9.135  | -1.143 | 1.00 | 31.67 |
| ATOM | 1784 | N   | LEU | 1672 | 23.013 | 8.139  | -0.343 | 1.00 | 32.31 |
| ATOM | 1786 | CA  | LEU | 1672 | 23.636 | 9.352  | 0.154  | 1.00 | 33.79 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1787 | CB  | LEU | 1672 | 24.841 | 8.986  | 1.008  | 1.00 | 34.49 |
| ATOM | 1788 | CG  | LEU | 1672 | 25.585 | 10.166 | 1.618  | 1.00 | 37.16 |
| ATOM | 1789 | CD1 | LEU | 1672 | 24.713 | 10.840 | 2.666  | 1.00 | 42.22 |
| ATOM | 1790 | CD2 | LEU | 1672 | 26.863 | 9.665  | 2.237  | 1.00 | 33.93 |
| ATOM | 1791 | C   | LEU | 1672 | 24.078 | 10.280 | -0.972 | 1.00 | 36.30 |
| ATOM | 1792 | O   | LEU | 1672 | 23.789 | 11.478 | -0.949 | 1.00 | 39.09 |
| ATOM | 1793 | N   | PHE | 1673 | 24.770 | 9.723  | -1.957 | 1.00 | 34.39 |
| ATOM | 1795 | CA  | PHE | 1673 | 25.266 | 10.504 | -3.075 | 1.00 | 33.81 |
| ATOM | 1796 | CB  | PHE | 1673 | 26.553 | 9.874  | -3.625 | 1.00 | 33.15 |
| ATOM | 1797 | CG  | PHE | 1673 | 27.661 | 9.761  | -2.617 | 1.00 | 33.44 |
| ATOM | 1798 | CD1 | PHE | 1673 | 28.313 | 8.545  | -2.419 | 1.00 | 32.17 |
| ATOM | 1799 | CD2 | PHE | 1673 | 28.055 | 10.867 | -1.861 | 1.00 | 34.87 |
| ATOM | 1800 | CE1 | PHE | 1673 | 29.346 | 8.419  | -1.484 | 1.00 | 31.98 |
| ATOM | 1801 | CE2 | PHE | 1673 | 29.090 | 10.757 | -0.919 | 1.00 | 36.31 |
| ATOM | 1802 | CZ  | PHE | 1673 | 29.736 | 9.525  | -0.732 | 1.00 | 34.55 |
| ATOM | 1803 | C   | PHE | 1673 | 24.273 | 10.670 | -4.217 | 1.00 | 34.79 |
| ATOM | 1804 | O   | PHE | 1673 | 24.135 | 11.754 | -4.765 | 1.00 | 35.74 |
| ATOM | 1805 | N   | ASP | 1674 | 23.584 | 9.588  | -4.572 | 1.00 | 37.31 |
| ATOM | 1807 | CA  | ASP | 1674 | 22.650 | 9.601  | -5.698 | 1.00 | 35.61 |
| ATOM | 1808 | CB  | ASP | 1674 | 22.917 | 8.392  | -6.600 | 1.00 | 37.01 |
| ATOM | 1809 | CG  | ASP | 1674 | 24.362 | 8.288  | -7.041 | 1.00 | 41.02 |
| ATOM | 1810 | OD1 | ASP | 1674 | 25.030 | 9.340  | -7.194 | 1.00 | 43.07 |
| ATOM | 1811 | OD2 | ASP | 1674 | 24.828 | 7.145  | -7.251 | 1.00 | 42.24 |
| ATOM | 1812 | C   | ASP | 1674 | 21.162 | 9.632  | -5.360 | 1.00 | 37.06 |
| ATOM | 1813 | O   | ASP | 1674 | 20.315 | 9.506  | -6.257 | 1.00 | 36.37 |
| ATOM | 1814 | N   | ARG | 1675 | 20.840 | 9.745  | -4.077 | 1.00 | 37.78 |
| ATOM | 1816 | CA  | ARG | 1675 | 19.445 | 9.791  | -3.650 | 1.00 | 39.41 |
| ATOM | 1817 | CB  | ARG | 1675 | 18.832 | 11.137 | -4.039 | 1.00 | 44.39 |
| ATOM | 1818 | CG  | ARG | 1675 | 19.413 | 12.299 | -3.269 | 1.00 | 54.30 |
| ATOM | 1819 | CD  | ARG | 1675 | 19.516 | 13.551 | -4.127 | 1.00 | 63.84 |
| ATOM | 1820 | NE  | ARG | 1675 | 20.060 | 14.664 | -3.349 | 1.00 | 73.69 |
| ATOM | 1822 | CZ  | ARG | 1675 | 19.652 | 15.925 | -3.453 | 1.00 | 77.10 |
| ATOM | 1823 | NH1 | ARG | 1675 | 18.695 | 16.253 | -4.312 | 1.00 | 79.65 |
| ATOM | 1826 | NH2 | ARG | 1675 | 20.177 | 16.855 | -2.665 | 1.00 | 79.31 |
| ATOM | 1829 | C   | ARG | 1675 | 18.617 | 8.639  | -4.221 | 1.00 | 37.46 |
| ATOM | 1830 | O   | ARG | 1675 | 17.447 | 8.808  | -4.557 | 1.00 | 38.57 |
| ATOM | 1831 | N   | ILE | 1676 | 19.235 | 7.475  | -4.351 | 1.00 | 34.37 |
| ATOM | 1833 | CA  | ILE | 1676 | 18.545 | 6.313  | -4.874 | 1.00 | 32.99 |
| ATOM | 1834 | CB  | ILE | 1676 | 19.358 | 5.644  | -5.976 | 1.00 | 33.98 |
| ATOM | 1835 | CG2 | ILE | 1676 | 18.552 | 4.529  | -6.602 | 1.00 | 35.04 |
| ATOM | 1836 | CG1 | ILE | 1676 | 19.708 | 6.663  | -7.050 | 1.00 | 34.92 |
| ATOM | 1837 | CD1 | ILE | 1676 | 20.799 | 6.200  | -7.962 | 1.00 | 41.16 |
| ATOM | 1838 | C   | ILE | 1676 | 18.315 | 5.315  | -3.743 | 1.00 | 31.55 |
| ATOM | 1839 | O   | ILE | 1676 | 19.245 | 4.632  | -3.300 | 1.00 | 30.65 |
| ATOM | 1840 | N   | TYR | 1677 | 17.082 | 5.279  | -3.246 | 1.00 | 30.88 |
| ATOM | 1842 | CA  | TYR | 1677 | 16.701 | 4.371  | -2.173 | 1.00 | 27.10 |
| ATOM | 1843 | CB  | TYR | 1677 | 15.771 | 5.074  | -1.208 | 1.00 | 28.30 |
| ATOM | 1844 | CG  | TYR | 1677 | 16.457 | 6.136  | -0.406 | 1.00 | 30.61 |
| ATOM | 1845 | CD1 | TYR | 1677 | 16.598 | 7.432  | -0.905 | 1.00 | 30.82 |
| ATOM | 1846 | CE1 | TYR | 1677 | 17.212 | 8.424  | -0.159 | 1.00 | 30.75 |
| ATOM | 1847 | CD2 | TYR | 1677 | 16.952 | 5.857  | 0.863  | 1.00 | 29.75 |
| ATOM | 1848 | CE2 | TYR | 1677 | 17.567 | 6.842  | 1.621  | 1.00 | 32.62 |
| ATOM | 1849 | CZ  | TYR | 1677 | 17.688 | 8.125  | 1.110  | 1.00 | 34.51 |
| ATOM | 1850 | OH  | TYR | 1677 | 18.238 | 9.118  | 1.888  | 1.00 | 38.89 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1852 | C   | TYR | 1677 | 16.029 | 3.149  | -2.743 | 1.00 | 25.47 |
| ATOM | 1853 | O   | TYR | 1677 | 15.132 | 3.264  | -3.578 | 1.00 | 26.00 |
| ATOM | 1854 | N   | THR | 1678 | 16.459 | 1.983  | -2.272 | 1.00 | 24.27 |
| ATOM | 1856 | CA  | THR | 1678 | 15.942 | 0.701  | -2.734 | 1.00 | 24.09 |
| ATOM | 1857 | CB  | THR | 1678 | 16.830 | 0.123  | -3.853 | 1.00 | 24.19 |
| ATOM | 1858 | OG1 | THR | 1678 | 18.165 | -0.008 | -3.349 | 1.00 | 27.81 |
| ATOM | 1860 | CG2 | THR | 1678 | 16.843 | 1.009  | -5.085 | 1.00 | 24.15 |
| ATOM | 1861 | C   | THR | 1678 | 15.979 | -0.297 | -1.577 | 1.00 | 25.02 |
| ATOM | 1862 | O   | THR | 1678 | 16.379 | 0.036  | -0.465 | 1.00 | 27.65 |
| ATOM | 1863 | N   | HIS | 1679 | 15.569 | -1.530 | -1.844 | 1.00 | 25.04 |
| ATOM | 1865 | CA  | HIS | 1679 | 15.591 | -2.560 | -0.818 | 1.00 | 24.35 |
| ATOM | 1866 | CB  | HIS | 1679 | 14.853 | -3.812 | -1.298 | 1.00 | 23.78 |
| ATOM | 1867 | CG  | HIS | 1679 | 13.390 | -3.592 | -1.536 | 1.00 | 27.24 |
| ATOM | 1868 | CD2 | HIS | 1679 | 12.627 | -3.758 | -2.643 | 1.00 | 28.22 |
| ATOM | 1869 | ND1 | HIS | 1679 | 12.532 | -3.137 | -0.551 | 1.00 | 30.64 |
| ATOM | 1871 | CE1 | HIS | 1679 | 11.310 | -3.028 | -1.041 | 1.00 | 28.13 |
| ATOM | 1872 | NE2 | HIS | 1679 | 11.339 | -3.400 | -2.307 | 1.00 | 28.52 |
| ATOM | 1874 | C   | HIS | 1679 | 17.056 | -2.846 | -0.514 | 1.00 | 22.52 |
| ATOM | 1875 | O   | HIS | 1679 | 17.419 | -3.179 | 0.613  | 1.00 | 22.58 |
| ATOM | 1876 | N   | GLN | 1680 | 17.898 | -2.604 | -1.516 | 1.00 | 24.34 |
| ATOM | 1878 | CA  | GLN | 1680 | 19.341 | -2.800 | -1.406 | 1.00 | 23.52 |
| ATOM | 1879 | CB  | GLN | 1680 | 19.998 | -2.781 | -2.782 | 1.00 | 25.36 |
| ATOM | 1880 | CG  | GLN | 1680 | 19.741 | -4.050 | -3.577 | 1.00 | 33.28 |
| ATOM | 1881 | CD  | GLN | 1680 | 19.212 | -3.763 | -4.949 | 1.00 | 34.68 |
| ATOM | 1882 | OE1 | GLN | 1680 | 18.683 | -2.686 | -5.187 | 1.00 | 41.24 |
| ATOM | 1883 | NE2 | GLN | 1680 | 19.357 | -4.713 | -5.867 | 1.00 | 32.10 |
| ATOM | 1886 | C   | GLN | 1680 | 19.998 | -1.767 | -0.514 | 1.00 | 23.38 |
| ATOM | 1887 | O   | GLN | 1680 | 20.925 | -2.094 | 0.224  | 1.00 | 25.12 |
| ATOM | 1888 | N   | SER | 1681 | 19.533 | -0.521 | -0.562 | 1.00 | 20.87 |
| ATOM | 1890 | CA  | SER | 1681 | 20.133 | 0.480  | 0.303  | 1.00 | 20.53 |
| ATOM | 1891 | CB  | SER | 1681 | 19.821 | 1.919  | -0.151 | 1.00 | 19.58 |
| ATOM | 1892 | OG  | SER | 1681 | 18.445 | 2.126  | -0.425 | 1.00 | 20.67 |
| ATOM | 1894 | C   | SER | 1681 | 19.696 | 0.189  | 1.741  | 1.00 | 22.22 |
| ATOM | 1895 | O   | SER | 1681 | 20.439 | 0.455  | 2.681  | 1.00 | 23.62 |
| ATOM | 1896 | N   | ASP | 1682 | 18.530 | -0.436 | 1.900  | 1.00 | 22.44 |
| ATOM | 1898 | CA  | ASP | 1682 | 18.054 | -0.816 | 3.231  | 1.00 | 22.70 |
| ATOM | 1899 | CB  | ASP | 1682 | 16.607 | -1.293 | 3.180  | 1.00 | 24.24 |
| ATOM | 1900 | CG  | ASP | 1682 | 15.603 | -0.165 | 3.352  | 1.00 | 28.23 |
| ATOM | 1901 | OD1 | ASP | 1682 | 14.410 | -0.425 | 3.108  | 1.00 | 28.14 |
| ATOM | 1902 | OD2 | ASP | 1682 | 15.976 | 0.960  | 3.757  | 1.00 | 25.23 |
| ATOM | 1903 | C   | ASP | 1682 | 18.926 | -1.941 | 3.777  | 1.00 | 23.92 |
| ATOM | 1904 | O   | ASP | 1682 | 19.121 | -2.057 | 4.990  | 1.00 | 26.24 |
| ATOM | 1905 | N   | VAL | 1683 | 19.433 | -2.788 | 2.884  | 1.00 | 23.67 |
| ATOM | 1907 | CA  | VAL | 1683 | 20.300 | -3.888 | 3.302  | 1.00 | 22.42 |
| ATOM | 1908 | CB  | VAL | 1683 | 20.562 | -4.881 | 2.141  | 1.00 | 23.70 |
| ATOM | 1909 | CG1 | VAL | 1683 | 21.724 | -5.802 | 2.459  | 1.00 | 19.73 |
| ATOM | 1910 | CG2 | VAL | 1683 | 19.292 | -5.713 | 1.889  | 1.00 | 19.85 |
| ATOM | 1911 | C   | VAL | 1683 | 21.584 | -3.298 | 3.860  | 1.00 | 21.94 |
| ATOM | 1912 | O   | VAL | 1683 | 22.030 | -3.688 | 4.938  | 1.00 | 22.69 |
| ATOM | 1913 | N   | TRP | 1684 | 22.141 | -2.320 | 3.154  | 1.00 | 20.51 |
| ATOM | 1915 | CA  | TRP | 1684 | 23.349 | -1.633 | 3.611  | 1.00 | 20.31 |
| ATOM | 1916 | CB  | TRP | 1684 | 23.659 | -0.446 | 2.680  | 1.00 | 19.01 |
| ATOM | 1917 | CG  | TRP | 1684 | 24.802 | 0.410  | 3.145  | 1.00 | 20.67 |
| ATOM | 1918 | CD2 | TRP | 1684 | 26.114 | 0.468  | 2.587  | 1.00 | 22.26 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1919 | CE2 | TRP | 1684 | 26.890 | 1.316  | 3.408  | 1.00 | 21.22 |
| ATOM | 1920 | CE3 | TRP | 1684 | 26.718 | -0.127 | 1.463  | 1.00 | 22.51 |
| ATOM | 1921 | CD1 | TRP | 1684 | 24.825 | 1.229  | 4.248  | 1.00 | 19.91 |
| ATOM | 1922 | NE1 | TRP | 1684 | 26.079 | 1.763  | 4.414  | 1.00 | 18.59 |
| ATOM | 1924 | CZ2 | TRP | 1684 | 28.236 | 1.586  | 3.148  | 1.00 | 20.81 |
| ATOM | 1925 | CZ3 | TRP | 1684 | 28.059 | 0.141  | 1.204  | 1.00 | 22.01 |
| ATOM | 1926 | CH2 | TRP | 1684 | 28.806 | 0.992  | 2.047  | 1.00 | 23.34 |
| ATOM | 1927 | C   | TRP | 1684 | 23.131 | -1.150 | 5.069  | 1.00 | 21.49 |
| ATOM | 1928 | O   | TRP | 1684 | 23.958 | -1.412 | 5.954  | 1.00 | 23.34 |
| ATOM | 1929 | N   | SER | 1685 | 22.015 | -0.463 | 5.308  | 1.00 | 21.84 |
| ATOM | 1931 | CA  | SER | 1685 | 21.652 | 0.042  | 6.634  | 1.00 | 20.02 |
| ATOM | 1932 | CB  | SER | 1685 | 20.310 | 0.773  | 6.559  | 1.00 | 19.12 |
| ATOM | 1933 | OG  | SER | 1685 | 20.335 | 1.791  | 5.578  | 1.00 | 21.62 |
| ATOM | 1935 | C   | SER | 1685 | 21.551 | -1.111 | 7.648  | 1.00 | 22.64 |
| ATOM | 1936 | O   | SER | 1685 | 21.908 | -0.946 | 8.829  | 1.00 | 22.09 |
| ATOM | 1937 | N   | PHE | 1686 | 21.043 | -2.266 | 7.202  | 1.00 | 22.44 |
| ATOM | 1939 | CA  | PHE | 1686 | 20.939 | -3.438 | 8.075  | 1.00 | 22.91 |
| ATOM | 1940 | CB  | PHE | 1686 | 20.196 | -4.588 | 7.380  | 1.00 | 23.75 |
| ATOM | 1941 | CG  | PHE | 1686 | 20.027 | -5.808 | 8.256  | 1.00 | 23.61 |
| ATOM | 1942 | CD1 | PHE | 1686 | 19.220 | -5.757 | 9.388  | 1.00 | 21.21 |
| ATOM | 1943 | CD2 | PHE | 1686 | 20.731 | -6.976 | 7.990  | 1.00 | 23.91 |
| ATOM | 1944 | CE1 | PHE | 1686 | 19.118 | -6.836 | 10.240 | 1.00 | 20.66 |
| ATOM | 1945 | CE2 | PHE | 1686 | 20.636 | -8.074 | 8.841  | 1.00 | 22.47 |
| ATOM | 1946 | CZ  | PHE | 1686 | 19.828 | -7.999 | 9.972  | 1.00 | 23.35 |
| ATOM | 1947 | C   | PHE | 1686 | 22.339 | -3.904 | 8.522  | 1.00 | 22.60 |
| ATOM | 1948 | O   | PHE | 1686 | 22.526 | -4.382 | 9.646  | 1.00 | 22.83 |
| ATOM | 1949 | N   | GLY | 1687 | 23.312 | -3.770 | 7.626  | 1.00 | 23.82 |
| ATOM | 1951 | CA  | GLY | 1687 | 24.682 | -4.140 | 7.941  | 1.00 | 22.58 |
| ATOM | 1952 | C   | GLY | 1687 | 25.175 | -3.262 | 9.071  | 1.00 | 21.49 |
| ATOM | 1953 | O   | GLY | 1687 | 25.832 | -3.749 | 9.990  | 1.00 | 21.62 |
| ATOM | 1954 | N   | VAL | 1688 | 24.849 | -1.968 | 9.008  | 1.00 | 21.15 |
| ATOM | 1956 | CA  | VAL | 1688 | 25.229 | -1.008 | 10.052 | 1.00 | 20.56 |
| ATOM | 1957 | CB  | VAL | 1688 | 24.894 | 0.479  | 9.647  | 1.00 | 17.69 |
| ATOM | 1958 | CG1 | VAL | 1688 | 25.408 | 1.456  | 10.690 | 1.00 | 15.11 |
| ATOM | 1959 | CG2 | VAL | 1688 | 25.518 | 0.821  | 8.314  | 1.00 | 11.54 |
| ATOM | 1960 | C   | VAL | 1688 | 24.494 | -1.398 | 11.346 | 1.00 | 22.60 |
| ATOM | 1961 | O   | VAL | 1688 | 25.083 | -1.407 | 12.428 | 1.00 | 25.23 |
| ATOM | 1962 | N   | LEU | 1689 | 23.215 | -1.755 | 11.229 | 1.00 | 26.09 |
| ATOM | 1964 | CA  | LEU | 1689 | 22.423 | -2.175 | 12.387 | 1.00 | 25.16 |
| ATOM | 1965 | CB  | LEU | 1689 | 20.976 | -2.455 | 11.965 | 1.00 | 25.91 |
| ATOM | 1966 | CG  | LEU | 1689 | 19.913 | -2.560 | 13.068 | 1.00 | 27.54 |
| ATOM | 1967 | CD1 | LEU | 1689 | 18.557 | -2.241 | 12.496 | 1.00 | 28.11 |
| ATOM | 1968 | CD2 | LEU | 1689 | 19.898 | -3.940 | 13.704 | 1.00 | 31.67 |
| ATOM | 1969 | C   | LEU | 1689 | 23.055 | -3.426 | 13.018 | 1.00 | 27.49 |
| ATOM | 1970 | O   | LEU | 1689 | 23.128 | -3.532 | 14.246 | 1.00 | 28.99 |
| ATOM | 1971 | N   | LEU | 1690 | 23.485 | -4.374 | 12.180 | 1.00 | 27.67 |
| ATOM | 1973 | CA  | LEU | 1690 | 24.149 | -5.596 | 12.643 | 1.00 | 26.76 |
| ATOM | 1974 | CB  | LEU | 1690 | 24.616 | -6.453 | 11.456 | 1.00 | 28.58 |
| ATOM | 1975 | CG  | LEU | 1690 | 23.651 | -7.406 | 10.733 | 1.00 | 29.46 |
| ATOM | 1976 | CD1 | LEU | 1690 | 24.372 | -8.064 | 9.565  | 1.00 | 27.79 |
| ATOM | 1977 | CD2 | LEU | 1690 | 23.130 | -8.488 | 11.691 | 1.00 | 28.15 |
| ATOM | 1978 | C   | LEU | 1690 | 25.362 | -5.176 | 13.476 | 1.00 | 26.19 |
| ATOM | 1979 | O   | LEU | 1690 | 25.565 | -5.670 | 14.597 | 1.00 | 25.29 |
| ATOM | 1980 | N   | TRP | 1691 | 26.124 | -4.217 | 12.946 | 1.00 | 25.89 |



|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1982 | CA  | TRP | 1691 | 27.302 | -3.682  | 13.631 | 1.00 | 27.31 |
| ATOM | 1983 | CB  | TRP | 1691 | 27.979 | -2.628  | 12.755 | 1.00 | 25.21 |
| ATOM | 1984 | CG  | TRP | 1691 | 29.338 | -2.170  | 13.257 | 1.00 | 27.00 |
| ATOM | 1985 | CD2 | TRP | 1691 | 29.606 | -1.060  | 14.134 | 1.00 | 24.28 |
| ATOM | 1986 | CE2 | TRP | 1691 | 31.001 | -0.988  | 14.297 | 1.00 | 23.03 |
| ATOM | 1987 | CE3 | TRP | 1691 | 28.792 | -0.118  | 14.778 | 1.00 | 22.80 |
| ATOM | 1988 | CD1 | TRP | 1691 | 30.562 | -2.712  | 12.944 | 1.00 | 24.10 |
| ATOM | 1989 | NE1 | TRP | 1691 | 31.557 | -2.010  | 13.567 | 1.00 | 23.41 |
| ATOM | 1991 | CZ2 | TRP | 1691 | 31.617 | -0.011  | 15.097 | 1.00 | 25.00 |
| ATOM | 1992 | CZ3 | TRP | 1691 | 29.398 | 0.851   | 15.573 | 1.00 | 26.78 |
| ATOM | 1993 | CH2 | TRP | 1691 | 30.802 | 0.900   | 15.719 | 1.00 | 27.78 |
| ATOM | 1994 | C   | TRP | 1691 | 26.947 | -3.088  | 15.012 | 1.00 | 28.70 |
| ATOM | 1995 | O   | TRP | 1691 | 27.708 | -3.245  | 15.974 | 1.00 | 29.56 |
| ATOM | 1996 | N   | GLU | 1692 | 25.808 | -2.400  | 15.104 | 1.00 | 29.51 |
| ATOM | 1998 | CA  | GLU | 1692 | 25.349 | -1.817  | 16.371 | 1.00 | 27.55 |
| ATOM | 1999 | CB  | GLU | 1692 | 24.120 | -0.935  | 16.171 | 1.00 | 28.35 |
| ATOM | 2000 | CG  | GLU | 1692 | 24.273 | 0.221   | 15.219 | 1.00 | 24.70 |
| ATOM | 2001 | CD  | GLU | 1692 | 22.982 | 0.989   | 15.100 | 1.00 | 25.44 |
| ATOM | 2002 | OE1 | GLU | 1692 | 22.224 | 0.744   | 14.148 | 1.00 | 24.34 |
| ATOM | 2003 | OE2 | GLU | 1692 | 22.696 | 1.816   | 15.982 | 1.00 | 27.57 |
| ATOM | 2004 | C   | GLU | 1692 | 24.958 | -2.918  | 17.352 | 1.00 | 28.74 |
| ATOM | 2005 | O   | GLU | 1692 | 25.099 | -2.753  | 18.557 | 1.00 | 28.76 |
| ATOM | 2006 | N   | ILE | 1693 | 24.421 | -4.023  | 16.844 | 1.00 | 29.23 |
| ATOM | 2008 | CA  | ILE | 1693 | 24.027 | -5.125  | 17.712 | 1.00 | 27.48 |
| ATOM | 2009 | CB  | ILE | 1693 | 23.205 | -6.226  | 16.944 | 1.00 | 26.80 |
| ATOM | 2010 | CG2 | ILE | 1693 | 22.983 | -7.469  | 17.842 | 1.00 | 22.98 |
| ATOM | 2011 | CG1 | ILE | 1693 | 21.840 | -5.658  | 16.508 | 1.00 | 27.36 |
| ATOM | 2012 | CD1 | ILE | 1693 | 21.005 | -6.585  | 15.635 | 1.00 | 24.84 |
| ATOM | 2013 | C   | ILE | 1693 | 25.259 | -5.750  | 18.357 | 1.00 | 27.27 |
| ATOM | 2014 | O   | ILE | 1693 | 25.320 | -5.902  | 19.575 | 1.00 | 28.15 |
| ATOM | 2015 | N   | PHE | 1694 | 26.273 | -6.043  | 17.552 | 1.00 | 27.83 |
| ATOM | 2017 | CA  | PHE | 1694 | 27.473 | -6.677  | 18.095 | 1.00 | 29.88 |
| ATOM | 2018 | CB  | PHE | 1694 | 28.143 | -7.525  | 17.011 | 1.00 | 28.66 |
| ATOM | 2019 | CG  | PHE | 1694 | 27.223 | -8.574  | 16.463 | 1.00 | 29.92 |
| ATOM | 2020 | CD1 | PHE | 1694 | 26.628 | -8.424  | 15.220 | 1.00 | 30.20 |
| ATOM | 2021 | CD2 | PHE | 1694 | 26.809 | -9.630  | 17.269 | 1.00 | 30.81 |
| ATOM | 2022 | CE1 | PHE | 1694 | 25.625 | -9.294  | 14.801 | 1.00 | 32.42 |
| ATOM | 2023 | CE2 | PHE | 1694 | 25.805 | -10.508 | 16.857 | 1.00 | 32.30 |
| ATOM | 2024 | CZ  | PHE | 1694 | 25.210 | -10.337 | 15.628 | 1.00 | 31.13 |
| ATOM | 2025 | C   | PHE | 1694 | 28.429 | -5.784  | 18.890 | 1.00 | 31.07 |
| ATOM | 2026 | O   | PHE | 1694 | 29.376 | -6.273  | 19.509 | 1.00 | 33.16 |
| ATOM | 2027 | N   | THR | 1695 | 28.157 | -4.480  | 18.897 | 1.00 | 29.20 |
| ATOM | 2029 | CA  | THR | 1695 | 28.934 | -3.532  | 19.670 | 1.00 | 27.38 |
| ATOM | 2030 | CB  | THR | 1695 | 29.412 | -2.333  | 18.823 | 1.00 | 24.77 |
| ATOM | 2031 | OG1 | THR | 1695 | 28.287 | -1.652  | 18.274 | 1.00 | 26.27 |
| ATOM | 2033 | CG2 | THR | 1695 | 30.305 | -2.800  | 17.706 | 1.00 | 20.18 |
| ATOM | 2034 | C   | THR | 1695 | 28.053 | -3.034  | 20.822 | 1.00 | 29.84 |
| ATOM | 2035 | O   | THR | 1695 | 28.430 | -2.103  | 21.548 | 1.00 | 32.77 |
| ATOM | 2036 | N   | LEU | 1696 | 26.898 | -3.687  | 20.988 | 1.00 | 28.52 |
| ATOM | 2038 | CA  | LEU | 1696 | 25.915 | -3.364  | 22.029 | 1.00 | 28.82 |
| ATOM | 2039 | CB  | LEU | 1696 | 26.356 | -3.886  | 23.394 | 1.00 | 32.50 |
| ATOM | 2040 | CG  | LEU | 1696 | 26.658 | -5.379  | 23.476 | 1.00 | 33.24 |
| ATOM | 2041 | CD1 | LEU | 1696 | 27.205 | -5.717  | 24.849 | 1.00 | 34.15 |
| ATOM | 2042 | CD2 | LEU | 1696 | 25.398 | -6.150  | 23.191 | 1.00 | 37.24 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 2043 | C   | LEU | 1696 | 25.553 | -1.888 | 22.131 | 1.00 | 26.98 |
| ATOM | 2044 | O   | LEU | 1696 | 25.579 | -1.297 | 23.207 | 1.00 | 27.59 |
| ATOM | 2045 | N   | GLY | 1697 | 25.148 | -1.317 | 21.007 | 1.00 | 27.86 |
| ATOM | 2047 | CA  | GLY | 1697 | 24.767 | 0.074  | 20.980 | 1.00 | 27.40 |
| ATOM | 2048 | C   | GLY | 1697 | 25.927 | 0.962  | 20.618 | 1.00 | 27.47 |
| ATOM | 2049 | O   | GLY | 1697 | 25.957 | 2.132  | 20.998 | 1.00 | 28.78 |
| ATOM | 2050 | N   | GLY | 1698 | 26.888 | 0.416  | 19.885 | 1.00 | 27.26 |
| ATOM | 2052 | CA  | GLY | 1698 | 28.031 | 1.212  | 19.482 | 1.00 | 29.54 |
| ATOM | 2053 | C   | GLY | 1698 | 27.651 | 2.301  | 18.492 | 1.00 | 31.17 |
| ATOM | 2054 | O   | GLY | 1698 | 26.669 | 2.177  | 17.755 | 1.00 | 33.73 |
| ATOM | 2055 | N   | SER | 1699 | 28.418 | 3.380  | 18.481 | 1.00 | 29.96 |
| ATOM | 2057 | CA  | SER | 1699 | 28.168 | 4.491  | 17.577 | 1.00 | 29.37 |
| ATOM | 2058 | CB  | SER | 1699 | 28.438 | 5.810  | 18.319 | 1.00 | 31.77 |
| ATOM | 2059 | OG  | SER | 1699 | 28.575 | 6.919  | 17.431 | 1.00 | 38.42 |
| ATOM | 2061 | C   | SER | 1699 | 29.093 | 4.350  | 16.369 | 1.00 | 27.98 |
| ATOM | 2062 | O   | SER | 1699 | 30.299 | 4.310  | 16.529 | 1.00 | 28.18 |
| ATOM | 2063 | N   | PRO | 1700 | 28.537 | 4.240  | 15.153 | 1.00 | 29.62 |
| ATOM | 2064 | CD  | PRO | 1700 | 27.104 | 4.259  | 14.794 | 1.00 | 31.22 |
| ATOM | 2065 | CA  | PRO | 1700 | 29.381 | 4.107  | 13.958 | 1.00 | 28.95 |
| ATOM | 2066 | CB  | PRO | 1700 | 28.356 | 4.003  | 12.807 | 1.00 | 27.21 |
| ATOM | 2067 | CG  | PRO | 1700 | 27.095 | 3.556  | 13.460 | 1.00 | 29.33 |
| ATOM | 2068 | C   | PRO | 1700 | 30.205 | 5.379  | 13.773 | 1.00 | 28.78 |
| ATOM | 2069 | O   | PRO | 1700 | 29.737 | 6.469  | 14.110 | 1.00 | 30.04 |
| ATOM | 2070 | N   | TYR | 1701 | 31.426 | 5.239  | 13.264 | 1.00 | 28.35 |
| ATOM | 2072 | CA  | TYR | 1701 | 32.296 | 6.390  | 12.987 | 1.00 | 30.77 |
| ATOM | 2073 | CB  | TYR | 1701 | 31.921 | 6.987  | 11.615 | 1.00 | 31.67 |
| ATOM | 2074 | CG  | TYR | 1701 | 32.060 | 6.037  | 10.454 | 1.00 | 34.61 |
| ATOM | 2075 | CD1 | TYR | 1701 | 30.952 | 5.673  | 9.686  | 1.00 | 38.26 |
| ATOM | 2076 | CE1 | TYR | 1701 | 31.083 | 4.806  | 8.587  | 1.00 | 40.99 |
| ATOM | 2077 | CD2 | TYR | 1701 | 33.301 | 5.520  | 10.106 | 1.00 | 38.16 |
| ATOM | 2078 | CE2 | TYR | 1701 | 33.449 | 4.662  | 9.020  | 1.00 | 41.04 |
| ATOM | 2079 | CZ  | TYR | 1701 | 32.343 | 4.312  | 8.263  | 1.00 | 43.11 |
| ATOM | 2080 | OH  | TYR | 1701 | 32.531 | 3.478  | 7.181  | 1.00 | 49.53 |
| ATOM | 2082 | C   | TYR | 1701 | 32.305 | 7.532  | 14.029 | 1.00 | 31.41 |
| ATOM | 2083 | O   | TYR | 1701 | 32.026 | 8.689  | 13.698 | 1.00 | 33.59 |
| ATOM | 2084 | N   | PRO | 1702 | 32.635 | 7.230  | 15.296 | 1.00 | 30.92 |
| ATOM | 2085 | CD  | PRO | 1702 | 32.998 | 5.938  | 15.888 | 1.00 | 32.30 |
| ATOM | 2086 | CA  | PRO | 1702 | 32.656 | 8.283  | 16.314 | 1.00 | 30.05 |
| ATOM | 2087 | CB  | PRO | 1702 | 33.123 | 7.548  | 17.561 | 1.00 | 27.77 |
| ATOM | 2088 | CG  | PRO | 1702 | 32.676 | 6.174  | 17.338 | 1.00 | 32.34 |
| ATOM | 2089 | C   | PRO | 1702 | 33.659 | 9.366  | 15.944 | 1.00 | 31.42 |
| ATOM | 2090 | O   | PRO | 1702 | 34.769 | 9.055  | 15.513 | 1.00 | 30.95 |
| ATOM | 2091 | N   | GLY | 1703 | 33.257 | 10.627 | 16.117 | 1.00 | 31.30 |
| ATOM | 2093 | CA  | GLY | 1703 | 34.122 | 11.751 | 15.817 | 1.00 | 29.66 |
| ATOM | 2094 | C   | GLY | 1703 | 34.172 | 12.138 | 14.351 | 1.00 | 31.00 |
| ATOM | 2095 | O   | GLY | 1703 | 34.752 | 13.165 | 13.999 | 1.00 | 30.69 |
| ATOM | 2096 | N   | VAL | 1704 | 33.551 | 11.331 | 13.491 | 1.00 | 31.11 |
| ATOM | 2098 | CA  | VAL | 1704 | 33.553 | 11.610 | 12.059 | 1.00 | 29.88 |
| ATOM | 2099 | CB  | VAL | 1704 | 33.539 | 10.310 | 11.244 | 1.00 | 28.41 |
| ATOM | 2100 | CG1 | VAL | 1704 | 33.585 | 10.624 | 9.750  | 1.00 | 26.24 |
| ATOM | 2101 | CG2 | VAL | 1704 | 34.702 | 9.429  | 11.649 | 1.00 | 24.10 |
| ATOM | 2102 | C   | VAL | 1704 | 32.396 | 12.508 | 11.604 | 1.00 | 30.80 |
| ATOM | 2103 | O   | VAL | 1704 | 31.224 | 12.146 | 11.712 | 1.00 | 32.50 |
| ATOM | 2104 | N   | PRO | 1705 | 32.718 | 13.705 | 11.104 | 1.00 | 30.86 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 2105 | CD  | PRO | 1705 | 34.039 | 14.350 | 11.077 | 1.00 | 30.59 |
| ATOM | 2106 | CA  | PRO | 1705 | 31.682 | 14.625 | 10.645 | 1.00 | 31.47 |
| ATOM | 2107 | CB  | PRO | 1705 | 32.400 | 15.971 | 10.680 | 1.00 | 32.75 |
| ATOM | 2108 | CG  | PRO | 1705 | 33.774 | 15.607 | 10.289 | 1.00 | 32.59 |
| ATOM | 2109 | C   | PRO | 1705 | 31.258 | 14.264 | 9.239  | 1.00 | 32.19 |
| ATOM | 2110 | O   | PRO | 1705 | 31.974 | 13.536 | 8.549  | 1.00 | 33.91 |
| ATOM | 2111 | N   | VAL | 1706 | 30.124 | 14.814 | 8.806  | 1.00 | 32.57 |
| ATOM | 2113 | CA  | VAL | 1706 | 29.560 | 14.576 | 7.474  | 1.00 | 31.80 |
| ATOM | 2114 | CB  | VAL | 1706 | 28.483 | 15.632 | 7.172  | 1.00 | 34.66 |
| ATOM | 2115 | CG1 | VAL | 1706 | 28.022 | 15.538 | 5.738  | 1.00 | 39.06 |
| ATOM | 2116 | CG2 | VAL | 1706 | 27.309 | 15.455 | 8.106  | 1.00 | 36.62 |
| ATOM | 2117 | C   | VAL | 1706 | 30.578 | 14.560 | 6.320  | 1.00 | 31.58 |
| ATOM | 2118 | O   | VAL | 1706 | 30.682 | 13.585 | 5.570  | 1.00 | 32.35 |
| ATOM | 2119 | N   | GLU | 1707 | 31.326 | 15.649 | 6.189  | 1.00 | 31.46 |
| ATOM | 2121 | CA  | GLU | 1707 | 32.329 | 15.788 | 5.139  | 1.00 | 31.68 |
| ATOM | 2122 | CB  | GLU | 1707 | 33.021 | 17.148 | 5.267  | 1.00 | 32.59 |
| ATOM | 2123 | C   | GLU | 1707 | 33.381 | 14.678 | 5.114  | 1.00 | 32.23 |
| ATOM | 2124 | O   | GLU | 1707 | 33.740 | 14.183 | 4.050  | 1.00 | 33.47 |
| ATOM | 2125 | N   | GLU | 1708 | 33.902 | 14.316 | 6.279  | 1.00 | 32.90 |
| ATOM | 2127 | CA  | GLU | 1708 | 34.909 | 13.268 | 6.352  | 1.00 | 33.86 |
| ATOM | 2128 | CB  | GLU | 1708 | 35.570 | 13.244 | 7.730  | 1.00 | 38.54 |
| ATOM | 2129 | CG  | GLU | 1708 | 36.190 | 14.575 | 8.165  | 1.00 | 47.63 |
| ATOM | 2130 | CD  | GLU | 1708 | 37.442 | 14.962 | 7.383  | 1.00 | 58.35 |
| ATOM | 2131 | OE1 | GLU | 1708 | 38.117 | 14.067 | 6.816  | 1.00 | 62.88 |
| ATOM | 2132 | OE2 | GLU | 1708 | 37.770 | 16.176 | 7.355  | 1.00 | 64.79 |
| ATOM | 2133 | C   | GLU | 1708 | 34.276 | 11.921 | 6.043  | 1.00 | 33.56 |
| ATOM | 2134 | O   | GLU | 1708 | 34.927 | 11.038 | 5.489  | 1.00 | 34.18 |
| ATOM | 2135 | N   | LEU | 1709 | 32.997 | 11.774 | 6.374  | 1.00 | 32.91 |
| ATOM | 2137 | CA  | LEU | 1709 | 32.285 | 10.532 | 6.108  | 1.00 | 33.83 |
| ATOM | 2138 | CB  | LEU | 1709 | 30.862 | 10.563 | 6.685  | 1.00 | 32.28 |
| ATOM | 2139 | CG  | LEU | 1709 | 30.015 | 9.363  | 6.231  | 1.00 | 32.92 |
| ATOM | 2140 | CD1 | LEU | 1709 | 30.541 | 8.071  | 6.853  | 1.00 | 28.37 |
| ATOM | 2141 | CD2 | LEU | 1709 | 28.563 | 9.580  | 6.568  | 1.00 | 31.90 |
| ATOM | 2142 | C   | LEU | 1709 | 32.222 | 10.283 | 4.606  | 1.00 | 34.15 |
| ATOM | 2143 | O   | LEU | 1709 | 32.412 | 9.152  | 4.156  | 1.00 | 34.75 |
| ATOM | 2144 | N   | PHE | 1710 | 31.918 | 11.332 | 3.844  | 1.00 | 33.83 |
| ATOM | 2146 | CA  | PHE | 1710 | 31.828 | 11.248 | 2.388  | 1.00 | 32.90 |
| ATOM | 2147 | CB  | PHE | 1710 | 31.531 | 12.622 | 1.787  | 1.00 | 34.85 |
| ATOM | 2148 | CG  | PHE | 1710 | 30.162 | 13.132 | 2.082  | 1.00 | 38.60 |
| ATOM | 2149 | CD1 | PHE | 1710 | 29.150 | 12.268 | 2.469  | 1.00 | 43.69 |
| ATOM | 2150 | CD2 | PHE | 1710 | 29.882 | 14.480 | 1.984  | 1.00 | 45.10 |
| ATOM | 2151 | CE1 | PHE | 1710 | 27.873 | 12.742 | 2.764  | 1.00 | 46.23 |
| ATOM | 2152 | CE2 | PHE | 1710 | 28.611 | 14.966 | 2.274  | 1.00 | 48.15 |
| ATOM | 2153 | CZ  | PHE | 1710 | 27.603 | 14.086 | 2.670  | 1.00 | 46.90 |
| ATOM | 2154 | C   | PHE | 1710 | 33.131 | 10.739 | 1.803  | 1.00 | 31.84 |
| ATOM | 2155 | O   | PHE | 1710 | 33.134 | 9.931  | 0.877  | 1.00 | 29.97 |
| ATOM | 2156 | N   | LYS | 1711 | 34.231 | 11.224 | 2.373  | 1.00 | 32.45 |
| ATOM | 2158 | CA  | LYS | 1711 | 35.582 | 10.860 | 1.947  | 1.00 | 34.53 |
| ATOM | 2159 | CB  | LYS | 1711 | 36.588 | 11.755 | 2.675  | 1.00 | 36.17 |
| ATOM | 2160 | CG  | LYS | 1711 | 38.008 | 11.669 | 2.182  | 1.00 | 41.07 |
| ATOM | 2161 | CD  | LYS | 1711 | 38.912 | 12.582 | 3.001  | 1.00 | 46.23 |
| ATOM | 2162 | CE  | LYS | 1711 | 40.311 | 12.648 | 2.418  | 1.00 | 51.79 |
| ATOM | 2163 | NZ  | LYS | 1711 | 41.036 | 11.360 | 2.556  | 1.00 | 57.27 |
| ATOM | 2167 | C   | LYS | 1711 | 35.867 | 9.375  | 2.215  | 1.00 | 33.82 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 2168 | O   | LYS | 1711 | 36.451 | 8.688  | 1.376  | 1.00 | 33.20 |
| ATOM | 2169 | N   | LEU | 1712 | 35.439 | 8.885  | 3.382  | 1.00 | 34.52 |
| ATOM | 2171 | CA  | LEU | 1712 | 35.618 | 7.477  | 3.754  | 1.00 | 33.25 |
| ATOM | 2172 | CB  | LEU | 1712 | 35.094 | 7.211  | 5.189  | 1.00 | 30.99 |
| ATOM | 2173 | CG  | LEU | 1712 | 35.746 | 7.917  | 6.393  | 1.00 | 29.71 |
| ATOM | 2174 | CD1 | LEU | 1712 | 35.047 | 7.552  | 7.678  | 1.00 | 24.11 |
| ATOM | 2175 | CD2 | LEU | 1712 | 37.208 | 7.552  | 6.497  | 1.00 | 32.21 |
| ATOM | 2176 | C   | LEU | 1712 | 34.833 | 6.631  | 2.744  | 1.00 | 32.16 |
| ATOM | 2177 | O   | LEU | 1712 | 35.378 | 5.732  | 2.109  | 1.00 | 32.77 |
| ATOM | 2178 | N   | LEU | 1713 | 33.562 | 6.967  | 2.563  | 1.00 | 31.72 |
| ATOM | 2180 | CA  | LEU | 1713 | 32.700 | 6.259  | 1.637  | 1.00 | 33.60 |
| ATOM | 2181 | CB  | LEU | 1713 | 31.299 | 6.879  | 1.619  | 1.00 | 36.57 |
| ATOM | 2182 | CG  | LEU | 1713 | 30.522 | 6.711  | 2.930  | 1.00 | 37.60 |
| ATOM | 2183 | CD1 | LEU | 1713 | 29.284 | 7.575  | 2.927  | 1.00 | 35.03 |
| ATOM | 2184 | CD2 | LEU | 1713 | 30.182 | 5.246  | 3.157  | 1.00 | 33.22 |
| ATOM | 2185 | C   | LEU | 1713 | 33.285 | 6.248  | 0.236  | 1.00 | 35.33 |
| ATOM | 2186 | O   | LEU | 1713 | 33.318 | 5.203  | -0.407 | 1.00 | 36.00 |
| ATOM | 2187 | N   | LYS | 1714 | 33.741 | 7.405  | -0.234 | 1.00 | 36.24 |
| ATOM | 2189 | CA  | LYS | 1714 | 34.331 | 7.501  | -1.566 | 1.00 | 36.35 |
| ATOM | 2190 | CB  | LYS | 1714 | 34.707 | 8.946  | -1.900 | 1.00 | 35.82 |
| ATOM | 2191 | CG  | LYS | 1714 | 33.520 | 9.837  | -2.168 | 1.00 | 37.23 |
| ATOM | 2192 | CD  | LYS | 1714 | 32.712 | 9.324  | -3.337 | 1.00 | 40.53 |
| ATOM | 2193 | CE  | LYS | 1714 | 31.506 | 10.198 | -3.600 | 1.00 | 44.51 |
| ATOM | 2194 | NZ  | LYS | 1714 | 30.747 | 9.724  | -4.804 | 1.00 | 50.76 |
| ATOM | 2198 | C   | LYS | 1714 | 35.559 | 6.613  | -1.701 | 1.00 | 37.60 |
| ATOM | 2199 | O   | LYS | 1714 | 35.808 | 6.039  | -2.764 | 1.00 | 40.82 |
| ATOM | 2200 | N   | GLU | 1715 | 36.299 | 6.452  | -0.615 | 1.00 | 35.61 |
| ATOM | 2202 | CA  | GLU | 1715 | 37.496 | 5.630  | -0.658 | 1.00 | 34.65 |
| ATOM | 2203 | CB  | GLU | 1715 | 38.517 | 6.188  | 0.320  | 1.00 | 37.83 |
| ATOM | 2204 | CG  | GLU | 1715 | 38.897 | 7.613  | -0.036 | 1.00 | 42.28 |
| ATOM | 2205 | CD  | GLU | 1715 | 39.634 | 8.342  | 1.061  | 1.00 | 45.64 |
| ATOM | 2206 | OE1 | GLU | 1715 | 39.928 | 7.726  | 2.114  | 1.00 | 43.09 |
| ATOM | 2207 | OE2 | GLU | 1715 | 39.918 | 9.544  | 0.853  | 1.00 | 47.56 |
| ATOM | 2208 | C   | GLU | 1715 | 37.244 | 4.145  | -0.419 | 1.00 | 32.94 |
| ATOM | 2209 | O   | GLU | 1715 | 38.177 | 3.348  | -0.419 | 1.00 | 33.31 |
| ATOM | 2210 | N   | GLY | 1716 | 35.983 | 3.779  | -0.213 | 1.00 | 29.12 |
| ATOM | 2212 | CA  | GLY | 1716 | 35.634 | 2.391  | 0.004  | 1.00 | 26.02 |
| ATOM | 2213 | C   | GLY | 1716 | 35.946 | 1.895  | 1.396  | 1.00 | 29.60 |
| ATOM | 2214 | O   | GLY | 1716 | 36.223 | 0.715  | 1.588  | 1.00 | 29.81 |
| ATOM | 2215 | N   | HIS | 1717 | 35.879 | 2.783  | 2.379  | 1.00 | 29.97 |
| ATOM | 2217 | CA  | HIS | 1717 | 36.158 | 2.409  | 3.763  | 1.00 | 30.78 |
| ATOM | 2218 | CB  | HIS | 1717 | 36.369 | 3.659  | 4.623  | 1.00 | 33.25 |
| ATOM | 2219 | CG  | HIS | 1717 | 36.653 | 3.360  | 6.067  | 1.00 | 34.70 |
| ATOM | 2220 | CD2 | HIS | 1717 | 37.820 | 3.155  | 6.715  | 1.00 | 32.77 |
| ATOM | 2221 | ND1 | HIS | 1717 | 35.656 | 3.219  | 7.010  | 1.00 | 36.90 |
| ATOM | 2223 | CE1 | HIS | 1717 | 36.200 | 2.932  | 8.180  | 1.00 | 35.87 |
| ATOM | 2224 | NE2 | HIS | 1717 | 37.513 | 2.887  | 8.027  | 1.00 | 31.93 |
| ATOM | 2226 | C   | HIS | 1717 | 35.035 | 1.577  | 4.375  | 1.00 | 29.63 |
| ATOM | 2227 | O   | HIS | 1717 | 33.861 | 1.847  | 4.133  | 1.00 | 30.82 |
| ATOM | 2228 | N   | ARG | 1718 | 35.406 | 0.600  | 5.201  | 1.00 | 27.92 |
| ATOM | 2230 | CA  | ARG | 1718 | 34.436 | -0.258 | 5.878  | 1.00 | 27.30 |
| ATOM | 2231 | CB  | ARG | 1718 | 34.379 | -1.641 | 5.236  | 1.00 | 24.10 |
| ATOM | 2232 | CG  | ARG | 1718 | 33.939 | -1.655 | 3.789  | 1.00 | 26.52 |
| ATOM | 2233 | CD  | ARG | 1718 | 32.469 | -1.288 | 3.627  | 1.00 | 26.96 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2234 | NE  | ARG | 1718 | 32.020 | -1.374  | 2.232  | 1.00 | 24.41 |
| ATOM | 2236 | CZ  | ARG | 1718 | 32.090 | -0.377  | 1.352  | 1.00 | 25.51 |
| ATOM | 2237 | NH1 | ARG | 1718 | 32.611 | 0.801   | 1.706  | 1.00 | 23.61 |
| ATOM | 2240 | NH2 | ARG | 1718 | 31.553 | -0.521  | 0.149  | 1.00 | 21.28 |
| ATOM | 2243 | C   | ARG | 1718 | 34.881 | -0.384  | 7.330  | 1.00 | 28.81 |
| ATOM | 2244 | O   | ARG | 1718 | 36.080 | -0.425  | 7.611  | 1.00 | 29.77 |
| ATOM | 2245 | N   | MET | 1719 | 33.920 | -0.377  | 8.250  | 1.00 | 30.40 |
| ATOM | 2247 | CA  | MET | 1719 | 34.215 | -0.485  | 9.673  | 1.00 | 30.62 |
| ATOM | 2248 | CB  | MET | 1719 | 32.942 | -0.339  | 10.497 | 1.00 | 28.91 |
| ATOM | 2249 | CG  | MET | 1719 | 32.235 | 1.003   | 10.316 | 1.00 | 30.85 |
| ATOM | 2250 | SD  | MET | 1719 | 30.829 | 1.237   | 11.432 | 1.00 | 33.27 |
| ATOM | 2251 | CE  | MET | 1719 | 29.521 | 0.416   | 10.561 | 1.00 | 31.81 |
| ATOM | 2252 | C   | MET | 1719 | 34.900 | -1.793  | 10.005 | 1.00 | 31.32 |
| ATOM | 2253 | O   | MET | 1719 | 34.755 | -2.769  | 9.278  | 1.00 | 31.47 |
| ATOM | 2254 | N   | ASP | 1720 | 35.651 | -1.799  | 11.103 | 1.00 | 33.78 |
| ATOM | 2256 | CA  | ASP | 1720 | 36.387 | -2.983  | 11.550 | 1.00 | 33.45 |
| ATOM | 2257 | CB  | ASP | 1720 | 37.478 | -2.580  | 12.546 | 1.00 | 36.99 |
| ATOM | 2258 | CG  | ASP | 1720 | 38.585 | -1.762  | 11.908 | 1.00 | 41.56 |
| ATOM | 2259 | OD1 | ASP | 1720 | 38.403 | -1.339  | 10.742 | 1.00 | 48.43 |
| ATOM | 2260 | OD2 | ASP | 1720 | 39.634 | -1.546  | 12.568 | 1.00 | 40.99 |
| ATOM | 2261 | C   | ASP | 1720 | 35.473 | -4.001  | 12.211 | 1.00 | 32.12 |
| ATOM | 2262 | O   | ASP | 1720 | 34.381 | -3.657  | 12.668 | 1.00 | 30.89 |
| ATOM | 2263 | N   | LYS | 1721 | 35.944 | -5.241  | 12.328 | 1.00 | 31.82 |
| ATOM | 2265 | CA  | LYS | 1721 | 35.127 | -6.270  | 12.953 | 1.00 | 31.71 |
| ATOM | 2266 | CB  | LYS | 1721 | 35.691 | -7.679  | 12.747 | 1.00 | 32.34 |
| ATOM | 2267 | CG  | LYS | 1721 | 34.762 | -8.738  | 13.344 | 1.00 | 34.85 |
| ATOM | 2268 | CD  | LYS | 1721 | 35.111 | -10.155 | 12.961 | 1.00 | 37.39 |
| ATOM | 2269 | CE  | LYS | 1721 | 35.266 | -10.674 | 13.765 | 1.00 | 41.42 |
| ATOM | 2270 | NZ  | LYS | 1721 | 36.348 | -12.154 | 13.635 | 1.00 | 46.55 |
| ATOM | 2274 | C   | LYS | 1721 | 35.007 | -6.018  | 14.430 | 1.00 | 33.40 |
| ATOM | 2275 | O   | LYS | 1721 | 36.017 | -5.879  | 15.121 | 1.00 | 34.26 |
| ATOM | 2276 | N   | PRO | 1722 | 33.768 | -5.924  | 14.934 | 1.00 | 34.26 |
| ATOM | 2277 | CD  | PRO | 1722 | 32.494 | -6.002  | 14.203 | 1.00 | 32.16 |
| ATOM | 2278 | CA  | PRO | 1722 | 33.546 | -5.692  | 16.362 | 1.00 | 35.84 |
| ATOM | 2279 | CB  | PRO | 1722 | 32.027 | -5.682  | 16.473 | 1.00 | 35.35 |
| ATOM | 2280 | CG  | PRO | 1722 | 31.575 | -5.255  | 15.108 | 1.00 | 35.35 |
| ATOM | 2281 | C   | PRO | 1722 | 34.105 | -6.904  | 17.099 | 1.00 | 40.41 |
| ATOM | 2282 | O   | PRO | 1722 | 34.010 | -8.038  | 16.607 | 1.00 | 41.14 |
| ATOM | 2283 | N   | SER | 1723 | 34.739 | -6.680  | 18.240 | 1.00 | 43.60 |
| ATOM | 2285 | CA  | SER | 1723 | 35.260 | -7.808  | 18.999 | 1.00 | 45.51 |
| ATOM | 2286 | CB  | SER | 1723 | 36.078 | -7.324  | 20.191 | 1.00 | 45.30 |
| ATOM | 2287 | OG  | SER | 1723 | 35.384 | -6.300  | 20.879 | 1.00 | 49.62 |
| ATOM | 2289 | C   | SER | 1723 | 34.031 | -8.589  | 19.460 | 1.00 | 46.39 |
| ATOM | 2290 | O   | SER | 1723 | 32.939 | -8.028  | 19.614 | 1.00 | 45.16 |
| ATOM | 2291 | N   | ASN | 1724 | 34.199 | -9.891  | 19.631 | 1.00 | 48.53 |
| ATOM | 2293 | CA  | ASN | 1724 | 33.088 | -10.723 | 20.065 | 1.00 | 51.13 |
| ATOM | 2294 | CB  | ASN | 1724 | 32.509 | -10.194 | 21.390 | 1.00 | 56.87 |
| ATOM | 2295 | CG  | ASN | 1724 | 33.595 | -9.892  | 22.427 | 1.00 | 61.65 |
| ATOM | 2296 | OD1 | ASN | 1724 | 34.503 | -10.702 | 22.649 | 1.00 | 63.73 |
| ATOM | 2297 | ND2 | ASN | 1724 | 33.526 | -8.713  | 23.039 | 1.00 | 64.64 |
| ATOM | 2300 | C   | ASN | 1724 | 32.034 | -10.743 | 18.941 | 1.00 | 48.83 |
| ATOM | 2301 | O   | ASN | 1724 | 30.846 | -10.534 | 19.145 | 1.00 | 50.50 |
| ATOM | 2302 | N   | CYS | 1725 | 32.511 | -10.977 | 17.734 | 1.00 | 45.23 |
| ATOM | 2304 | CA  | CYS | 1725 | 31.654 | -11.056 | 16.570 | 1.00 | 42.33 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2305 | CB  | CYS | 1725 | 31.570 | -9.702  | 15.854 | 1.00 | 41.48 |
| ATOM | 2306 | SG  | CYS | 1725 | 30.711 | -9.751  | 14.275 | 1.00 | 40.38 |
| ATOM | 2307 | C   | CYS | 1725 | 32.383 | -12.077 | 15.725 | 1.00 | 39.64 |
| ATOM | 2308 | O   | CYS | 1725 | 33.601 | -12.004 | 15.579 | 1.00 | 42.00 |
| ATOM | 2309 | N   | THR | 1726 | 31.664 | -13.090 | 15.263 | 1.00 | 35.96 |
| ATOM | 2311 | CA  | THR | 1726 | 32.275 | -14.139 | 14.459 | 1.00 | 33.61 |
| ATOM | 2312 | CB  | THR | 1726 | 31.301 | -15.326 | 14.326 | 1.00 | 33.29 |
| ATOM | 2313 | OG1 | THR | 1726 | 30.071 | -14.904 | 13.711 | 1.00 | 34.53 |
| ATOM | 2315 | CG2 | THR | 1726 | 30.981 | -15.861 | 15.696 | 1.00 | 25.84 |
| ATOM | 2316 | C   | THR | 1726 | 32.720 | -13.629 | 13.092 | 1.00 | 32.27 |
| ATOM | 2317 | O   | THR | 1726 | 32.257 | -12.593 | 12.643 | 1.00 | 33.04 |
| ATOM | 2318 | N   | ASN | 1727 | 33.643 | -14.315 | 12.434 | 1.00 | 32.98 |
| ATOM | 2320 | CA  | ASN | 1727 | 34.050 | -13.850 | 11.114 | 1.00 | 34.97 |
| ATOM | 2321 | CB  | ASN | 1727 | 35.198 | -14.680 | 10.541 | 1.00 | 39.89 |
| ATOM | 2322 | CG  | ASN | 1727 | 36.540 | -14.271 | 11.103 | 1.00 | 45.37 |
| ATOM | 2323 | OD1 | ASN | 1727 | 37.044 | -13.177 | 10.826 | 1.00 | 48.43 |
| ATOM | 2324 | ND2 | ASN | 1727 | 37.125 | -15.141 | 11.909 | 1.00 | 45.88 |
| ATOM | 2327 | C   | ASN | 1727 | 32.846 | -13.947 | 10.192 | 1.00 | 33.97 |
| ATOM | 2328 | O   | ASN | 1727 | 32.646 | -13.088 | 9.341  | 1.00 | 35.07 |
| ATOM | 2329 | N   | GLU | 1728 | 32.024 | -14.973 | 10.414 | 1.00 | 31.69 |
| ATOM | 2331 | CA  | GLU | 1728 | 30.814 | -15.210 | 9.620  | 1.00 | 30.27 |
| ATOM | 2332 | CB  | GLU | 1728 | 30.141 | -16.493 | 10.083 | 1.00 | 32.53 |
| ATOM | 2333 | CG  | GLU | 1728 | 28.932 | -16.878 | 9.273  | 1.00 | 32.81 |
| ATOM | 2334 | CD  | GLU | 1728 | 28.353 | -18.190 | 9.711  | 1.00 | 36.43 |
| ATOM | 2335 | OE1 | GLU | 1728 | 28.339 | -18.466 | 10.932 | 1.00 | 36.75 |
| ATOM | 2336 | OE2 | GLU | 1728 | 27.908 | -18.945 | 8.829  | 1.00 | 41.92 |
| ATOM | 2337 | C   | GLU | 1728 | 29.814 | -14.049 | 9.681  | 1.00 | 28.70 |
| ATOM | 2338 | O   | GLU | 1728 | 29.234 | -13.655 | 8.660  | 1.00 | 28.51 |
| ATOM | 2339 | N   | LEU | 1729 | 29.594 | -13.517 | 10.880 | 1.00 | 26.77 |
| ATOM | 2341 | CA  | LEU | 1729 | 28.687 | -12.393 | 11.040 | 1.00 | 26.80 |
| ATOM | 2342 | CB  | LEU | 1729 | 28.228 | -12.274 | 12.490 | 1.00 | 27.91 |
| ATOM | 2343 | CG  | LEU | 1729 | 27.233 | -13.355 | 12.913 | 1.00 | 30.71 |
| ATOM | 2344 | CD1 | LEU | 1729 | 27.095 | -13.345 | 14.428 | 1.00 | 35.79 |
| ATOM | 2345 | CD2 | LEU | 1729 | 25.885 | -13.141 | 12.253 | 1.00 | 25.70 |
| ATOM | 2346 | C   | LEU | 1729 | 29.319 | -11.089 | 10.540 | 1.00 | 27.06 |
| ATOM | 2347 | O   | LEU | 1729 | 28.610 | -10.177 | 10.126 | 1.00 | 30.27 |
| ATOM | 2348 | N   | TYR | 1730 | 30.650 | -11.004 | 10.549 | 1.00 | 27.03 |
| ATOM | 2350 | CA  | TYR | 1730 | 31.328 | -9.812  | 10.039 | 1.00 | 26.21 |
| ATOM | 2351 | CB  | TYR | 1730 | 32.792 | -9.778  | 10.474 | 1.00 | 25.31 |
| ATOM | 2352 | CG  | TYR | 1730 | 33.538 | -8.553  | 9.982  | 1.00 | 24.89 |
| ATOM | 2353 | CD1 | TYR | 1730 | 33.012 | -7.270  | 10.169 | 1.00 | 23.59 |
| ATOM | 2354 | CE1 | TYR | 1730 | 33.655 | -6.148  | 9.665  | 1.00 | 24.74 |
| ATOM | 2355 | CD2 | TYR | 1730 | 34.739 | -8.675  | 9.285  | 1.00 | 22.11 |
| ATOM | 2356 | CE2 | TYR | 1730 | 35.399 | -7.560  | 8.775  | 1.00 | 22.32 |
| ATOM | 2357 | CZ  | TYR | 1730 | 34.853 | -6.295  | 8.962  | 1.00 | 26.07 |
| ATOM | 2358 | OH  | TYR | 1730 | 35.484 | -5.181  | 8.418  | 1.00 | 22.70 |
| ATOM | 2360 | C   | TYR | 1730 | 31.227 | -9.878  | 8.509  | 1.00 | 27.71 |
| ATOM | 2361 | O   | TYR | 1730 | 30.960 | -8.875  | 7.843  | 1.00 | 28.05 |
| ATOM | 2362 | N   | MET | 1731 | 31.409 | -11.081 | 7.977  | 1.00 | 27.92 |
| ATOM | 2364 | CA  | MET | 1731 | 31.306 | -11.355 | 6.548  | 1.00 | 28.89 |
| ATOM | 2365 | CB  | MET | 1731 | 31.506 | -12.853 | 6.317  | 1.00 | 35.84 |
| ATOM | 2366 | CG  | MET | 1731 | 31.068 | -13.379 | 4.975  | 1.00 | 45.50 |
| ATOM | 2367 | SD  | MET | 1731 | 31.347 | -15.167 | 4.865  | 1.00 | 56.40 |
| ATOM | 2368 | CE  | MET | 1731 | 32.106 | -15.263 | 3.217  | 1.00 | 56.88 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2369 | C   | MET | 1731 | 29.916 | -10.928 | 6.102  | 1.00 | 27.79 |
| ATOM | 2370 | O   | MET | 1731 | 29.755 | -10.345 | 5.041  | 1.00 | 30.68 |
| ATOM | 2371 | N   | MET | 1732 | 28.915 | -11.203 | 6.932  | 1.00 | 28.02 |
| ATOM | 2373 | CA  | MET | 1732 | 27.546 | -10.804 | 6.639  | 1.00 | 25.74 |
| ATOM | 2374 | CB  | MET | 1732 | 26.598 | -11.317 | 7.718  | 1.00 | 24.94 |
| ATOM | 2375 | CG  | MET | 1732 | 25.153 | -10.911 | 7.492  | 1.00 | 22.96 |
| ATOM | 2376 | SD  | MET | 1732 | 24.008 | -11.593 | 8.684  | 1.00 | 24.39 |
| ATOM | 2377 | CE  | MET | 1732 | 23.798 | -13.272 | 8.002  | 1.00 | 18.04 |
| ATOM | 2378 | C   | MET | 1732 | 27.470 | -9.273  | 6.559  | 1.00 | 25.81 |
| ATOM | 2379 | O   | MET | 1732 | 26.889 | -8.729  | 5.620  | 1.00 | 26.85 |
| ATOM | 2380 | N   | MET | 1733 | 28.068 | -8.587  | 7.537  | 1.00 | 24.84 |
| ATOM | 2382 | CA  | MET | 1733 | 28.092 | -7.124  | 7.545  | 1.00 | 25.27 |
| ATOM | 2383 | CB  | MET | 1733 | 28.931 | -6.600  | 9.700  | 1.00 | 25.97 |
| ATOM | 2384 | CG  | MET | 1733 | 28.342 | -6.769  | 10.058 | 1.00 | 28.69 |
| ATOM | 2385 | SD  | MET | 1733 | 29.456 | -6.094  | 11.295 | 1.00 | 29.06 |
| ATOM | 2386 | CE  | MET | 1733 | 28.927 | -7.051  | 12.693 | 1.00 | 28.07 |
| ATOM | 2387 | C   | MET | 1733 | 28.741 | -6.628  | 6.270  | 1.00 | 26.97 |
| ATOM | 2388 | O   | MET | 1733 | 28.192 | -5.771  | 5.581  | 1.00 | 28.37 |
| ATOM | 2389 | N   | ARG | 1734 | 29.922 | -7.160  | 5.966  | 1.00 | 28.77 |
| ATOM | 2391 | CA  | ARG | 1734 | 30.664 | -6.775  | 4.762  | 1.00 | 29.66 |
| ATOM | 2392 | CB  | ARG | 1734 | 32.027 | -7.482  | 4.716  | 1.00 | 29.05 |
| ATOM | 2393 | CG  | ARG | 1734 | 32.968 | -7.109  | 5.866  | 1.00 | 25.00 |
| ATOM | 2394 | CD  | ARG | 1734 | 33.247 | -5.621  | 5.882  | 1.00 | 29.27 |
| ATOM | 2395 | NE  | ARG | 1734 | 33.911 | -5.210  | 4.647  | 1.00 | 35.43 |
| ATOM | 2397 | CZ  | ARG | 1734 | 35.233 | -5.220  | 4.466  | 1.00 | 38.24 |
| ATOM | 2398 | NH1 | ARG | 1734 | 36.054 | -5.601  | 5.445  | 1.00 | 36.47 |
| ATOM | 2401 | NH2 | ARG | 1734 | 35.732 | -4.907  | 3.277  | 1.00 | 38.57 |
| ATOM | 2404 | C   | ARG | 1734 | 29.859 | -7.034  | 3.478  | 1.00 | 29.57 |
| ATOM | 2405 | O   | ARG | 1734 | 29.920 | -6.242  | 2.538  | 1.00 | 29.55 |
| ATOM | 2406 | N   | ASP | 1735 | 29.095 | -8.124  | 3.448  | 1.00 | 28.07 |
| ATOM | 2408 | CA  | ASP | 1735 | 28.259 | -8.423  | 2.287  | 1.00 | 27.96 |
| ATOM | 2409 | CB  | ASP | 1735 | 27.634 | -9.813  | 2.408  | 1.00 | 28.60 |
| ATOM | 2410 | CG  | ASP | 1735 | 28.664 | -10.926 | 2.283  | 1.00 | 31.34 |
| ATOM | 2411 | OD1 | ASP | 1735 | 29.785 | -10.660 | 1.798  | 1.00 | 31.12 |
| ATOM | 2412 | OD2 | ASP | 1735 | 28.356 | -12.068 | 2.687  | 1.00 | 36.07 |
| ATOM | 2413 | C   | ASP | 1735 | 27.159 | -7.368  | 2.155  | 1.00 | 27.24 |
| ATOM | 2414 | O   | ASP | 1735 | 26.846 | -6.932  | 1.050  | 1.00 | 25.79 |
| ATOM | 2415 | N   | CYS | 1736 | 26.590 | -6.951  | 3.288  | 1.00 | 26.53 |
| ATOM | 2417 | CA  | CYS | 1736 | 25.547 | -5.930  | 3.314  | 1.00 | 24.35 |
| ATOM | 2418 | CB  | CYS | 1736 | 24.968 | -5.765  | 4.731  | 1.00 | 22.01 |
| ATOM | 2419 | SG  | CYS | 1736 | 23.885 | -7.101  | 5.281  | 1.00 | 21.52 |
| ATOM | 2420 | C   | CYS | 1736 | 26.119 | -4.595  | 2.847  | 1.00 | 24.26 |
| ATOM | 2421 | O   | CYS | 1736 | 25.386 | -3.725  | 2.368  | 1.00 | 24.19 |
| ATOM | 2422 | N   | TRP | 1737 | 27.432 | -4.437  | 3.002  | 1.00 | 22.94 |
| ATOM | 2424 | CA  | TRP | 1737 | 28.104 | -3.210  | 2.605  | 1.00 | 21.91 |
| ATOM | 2425 | CB  | TRP | 1737 | 29.146 | -2.820  | 3.640  | 1.00 | 19.26 |
| ATOM | 2426 | CG  | TRP | 1737 | 28.572 | -2.493  | 4.947  | 1.00 | 20.89 |
| ATOM | 2427 | CD2 | TRP | 1737 | 29.226 | -2.602  | 6.212  | 1.00 | 23.33 |
| ATOM | 2428 | CE2 | TRP | 1737 | 28.315 | -2.159  | 7.196  | 1.00 | 21.59 |
| ATOM | 2429 | CE3 | TRP | 1737 | 30.506 | -3.026  | 6.614  | 1.00 | 25.00 |
| ATOM | 2430 | CD1 | TRP | 1737 | 27.319 | -2.012  | 5.201  | 1.00 | 19.90 |
| ATOM | 2431 | NE1 | TRP | 1737 | 27.158 | -1.807  | 6.551  | 1.00 | 20.77 |
| ATOM | 2433 | CZ2 | TRP | 1737 | 28.641 | -2.127  | 8.563  | 1.00 | 19.89 |
| ATOM | 2434 | CZ3 | TRP | 1737 | 30.825 | -2.993  | 7.971  | 1.00 | 21.23 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2435 | CH2 | TRP | 1737 | 29.896 | -2.543  | 8.927  | 1.00 | 21.09 |
| ATOM | 2436 | C   | TRP | 1737 | 28.758 | -3.266  | 1.232  | 1.00 | 23.54 |
| ATOM | 2437 | O   | TRP | 1737 | 29.653 | -2.477  | 0.939  | 1.00 | 24.68 |
| ATOM | 2438 | N   | HIS | 1738 | 28.315 | -4.185  | 0.382  | 1.00 | 24.37 |
| ATOM | 2440 | CA  | HIS | 1738 | 28.877 | -4.287  | -0.947 | 1.00 | 24.42 |
| ATOM | 2441 | CB  | HIS | 1738 | 28.243 | -5.436  | -1.728 | 1.00 | 23.72 |
| ATOM | 2442 | CG  | HIS | 1738 | 29.131 | -5.985  | -2.801 | 1.00 | 27.20 |
| ATOM | 2443 | CD2 | HIS | 1738 | 29.595 | -5.425  | -3.948 | 1.00 | 26.45 |
| ATOM | 2444 | ND1 | HIS | 1738 | 29.681 | -7.255  | -2.751 | 1.00 | 29.26 |
| ATOM | 2446 | CE1 | HIS | 1738 | 30.436 | -7.441  | -3.816 | 1.00 | 29.25 |
| ATOM | 2447 | NE2 | HIS | 1738 | 30.409 | -6.358  | -4.556 | 1.00 | 27.32 |
| ATOM | 2449 | C   | HIS | 1738 | 28.716 | -2.970  | -1.713 | 1.00 | 25.82 |
| ATOM | 2450 | O   | HIS | 1738 | 27.675 | -2.314  | -1.660 | 1.00 | 23.96 |
| ATOM | 2451 | N   | ALA | 1739 | 29.802 | -2.564  | -2.362 | 1.00 | 26.27 |
| ATOM | 2453 | CA  | ALA | 1739 | 29.825 | -1.346  | -3.158 | 1.00 | 25.46 |
| ATOM | 2454 | CB  | ALA | 1739 | 31.186 | -1.180  | -3.789 | 1.00 | 25.70 |
| ATOM | 2455 | C   | ALA | 1739 | 28.754 | -1.443  | -4.233 | 1.00 | 26.18 |
| ATOM | 2456 | O   | ALA | 1739 | 28.116 | -0.455  | -4.574 | 1.00 | 29.14 |
| ATOM | 2457 | N   | VAL | 1740 | 28.570 | -2.643  | -4.774 | 1.00 | 25.71 |
| ATOM | 2459 | CA  | VAL | 1740 | 27.560 | -2.875  | -5.802 | 1.00 | 26.12 |
| ATOM | 2460 | CB  | VAL | 1740 | 28.063 | -3.841  | -6.903 | 1.00 | 25.99 |
| ATOM | 2461 | CG1 | VAL | 1740 | 27.102 | -3.832  | -8.090 | 1.00 | 23.37 |
| ATOM | 2462 | CG2 | VAL | 1740 | 29.450 | -3.440  | -7.349 | 1.00 | 22.07 |
| ATOM | 2463 | C   | VAL | 1740 | 26.247 | -3.400  | -5.191 | 1.00 | 25.43 |
| ATOM | 2464 | O   | VAL | 1740 | 26.186 | -4.550  | -4.704 | 1.00 | 24.93 |
| ATOM | 2465 | N   | PRO | 1741 | 25.170 | -2.585  | -5.265 | 1.00 | 24.20 |
| ATOM | 2466 | CD  | PRO | 1741 | 25.151 | -1.277  | -5.953 | 1.00 | 18.88 |
| ATOM | 2467 | CA  | PRO | 1741 | 23.838 | -2.914  | -4.734 | 1.00 | 25.28 |
| ATOM | 2468 | CB  | PRO | 1741 | 22.953 | -1.788  | -5.294 | 1.00 | 22.75 |
| ATOM | 2469 | CG  | PRO | 1741 | 23.903 | -0.632  | -5.398 | 1.00 | 20.99 |
| ATOM | 2470 | C   | PRO | 1741 | 23.299 | -4.296  | -5.128 | 1.00 | 25.84 |
| ATOM | 2471 | O   | PRO | 1741 | 22.787 | -5.036  | -4.280 | 1.00 | 25.99 |
| ATOM | 2472 | N   | SER | 1742 | 23.425 | -4.642  | -6.407 | 1.00 | 26.48 |
| ATOM | 2474 | CA  | SER | 1742 | 22.942 | -5.919  | -6.930 | 1.00 | 25.19 |
| ATOM | 2475 | CB  | SER | 1742 | 23.151 | -5.992  | -8.440 | 1.00 | 25.68 |
| ATOM | 2476 | OG  | SER | 1742 | 24.530 | -5.943  | -8.769 | 1.00 | 27.46 |
| ATOM | 2478 | C   | SER | 1742 | 23.644 | -7.100  | -6.289 | 1.00 | 25.24 |
| ATOM | 2479 | O   | SER | 1742 | 23.124 | -8.218  | -6.300 | 1.00 | 26.09 |
| ATOM | 2480 | N   | GLN | 1743 | 24.826 | -6.851  | -5.731 | 1.00 | 23.88 |
| ATOM | 2482 | CA  | GLN | 1743 | 25.590 | -7.917  | -5.118 | 1.00 | 24.44 |
| ATOM | 2483 | CB  | GLN | 1743 | 27.069 | -7.733  | -5.437 | 1.00 | 27.26 |
| ATOM | 2484 | CG  | GLN | 1743 | 27.344 | -7.784  | -6.940 | 1.00 | 27.39 |
| ATOM | 2485 | CD  | GLN | 1743 | 26.803 | -9.047  | -7.581 | 1.00 | 26.46 |
| ATOM | 2486 | OE1 | GLN | 1743 | 27.325 | -10.136 | -7.339 | 1.00 | 25.80 |
| ATOM | 2487 | NE2 | GLN | 1743 | 25.760 | -8.914  | -8.393 | 1.00 | 27.42 |
| ATOM | 2490 | C   | GLN | 1743 | 25.348 | -8.151  | -3.633 | 1.00 | 23.20 |
| ATOM | 2491 | O   | GLN | 1743 | 25.810 | -9.147  | -3.083 | 1.00 | 22.90 |
| ATOM | 2492 | N   | ARG | 1744 | 24.628 | -7.243  | -2.984 | 1.00 | 22.15 |
| ATOM | 2494 | CA  | ARG | 1744 | 24.318 | -7.398  | -1.568 | 1.00 | 21.23 |
| ATOM | 2495 | CB  | ARG | 1744 | 23.767 | -6.088  | -0.998 | 1.00 | 19.01 |
| ATOM | 2496 | CG  | ARG | 1744 | 24.705 | -4.916  | -1.145 | 1.00 | 17.27 |
| ATOM | 2497 | CD  | ARG | 1744 | 24.091 | -3.605  | -0.679 | 1.00 | 14.79 |
| ATOM | 2498 | NE  | ARG | 1744 | 24.914 | -2.493  | -1.157 | 1.00 | 19.72 |
| ATOM | 2500 | CZ  | ARG | 1744 | 24.482 | -1.258  | -1.391 | 1.00 | 19.23 |



|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2501 | NH1 | ARG | 1744 | 23.201 | -0.931  | -1.201 | 1.00 | 15.90 |
| ATOM | 2504 | NH2 | ARG | 1744 | 25.343 | -0.343  | -1.821 | 1.00 | 19.43 |
| ATOM | 2507 | C   | ARG | 1744 | 23.259 | -8.496  | -1.438 | 1.00 | 21.95 |
| ATOM | 2508 | O   | ARG | 1744 | 22.585 | -8.827  | -2.415 | 1.00 | 25.34 |
| ATOM | 2509 | N   | PRO | 1745 | 23.213 | -9.184  | -0.292 | 1.00 | 20.82 |
| ATOM | 2510 | CD  | PRO | 1745 | 24.191 | -9.219  | 0.804  | 1.00 | 21.25 |
| ATOM | 2511 | CA  | PRO | 1745 | 22.204 | -10.229 | -0.127 | 1.00 | 21.39 |
| ATOM | 2512 | CB  | PRO | 1745 | 22.687 | -10.980 | 1.117  | 1.00 | 21.69 |
| ATOM | 2513 | CG  | PRO | 1745 | 23.418 | -9.916  | 1.886  | 1.00 | 22.62 |
| ATOM | 2514 | C   | PRO | 1745 | 20.833 | -9.585  | 0.102  | 1.00 | 22.15 |
| ATOM | 2515 | O   | PRO | 1745 | 20.739 | -8.402  | 0.426  | 1.00 | 23.29 |
| ATOM | 2516 | N   | THR | 1746 | 19.771 | -10.349 | -0.109 | 1.00 | 20.93 |
| ATOM | 2518 | CA  | THR | 1746 | 18.440 | -9.827  | 0.107  | 1.00 | 19.90 |
| ATOM | 2519 | CB  | THR | 1746 | 17.391 | -10.554 | -0.783 | 1.00 | 20.21 |
| ATOM | 2520 | OG1 | THR | 1746 | 17.484 | -11.974 | -0.584 | 1.00 | 22.03 |
| ATOM | 2522 | CG2 | THR | 1746 | 17.609 | -10.242 | -2.255 | 1.00 | 20.82 |
| ATOM | 2523 | C   | THR | 1746 | 18.112 | -10.095 | 1.557  | 1.00 | 19.77 |
| ATOM | 2524 | O   | THR | 1746 | 18.842 | -10.823 | 2.228  | 1.00 | 19.19 |
| ATOM | 2525 | N   | PHE | 1747 | 17.010 | -9.526  | 2.045  | 1.00 | 23.46 |
| ATOM | 2527 | CA  | PHE | 1747 | 16.582 | -9.770  | 3.422  | 1.00 | 21.64 |
| ATOM | 2528 | CB  | PHE | 1747 | 15.473 | -8.794  | 3.827  | 1.00 | 18.89 |
| ATOM | 2529 | CG  | PHE | 1747 | 15.987 | -7.445  | 4.262  | 1.00 | 17.45 |
| ATOM | 2530 | CD1 | PHE | 1747 | 16.757 | -7.317  | 5.417  | 1.00 | 17.65 |
| ATOM | 2531 | CD2 | PHE | 1747 | 15.712 | -6.303  | 3.516  | 1.00 | 15.37 |
| ATOM | 2532 | CE1 | PHE | 1747 | 17.242 | -6.073  | 5.819  | 1.00 | 16.17 |
| ATOM | 2533 | CE2 | PHE | 1747 | 16.189 | -5.056  | 3.907  | 1.00 | 14.53 |
| ATOM | 2534 | CZ  | PHE | 1747 | 16.959 | -4.941  | 5.065  | 1.00 | 16.88 |
| ATOM | 2535 | C   | PHE | 1747 | 16.118 | -11.227 | 3.522  | 1.00 | 23.18 |
| ATOM | 2536 | O   | PHE | 1747 | 16.271 | -11.873 | 4.548  | 1.00 | 24.04 |
| ATOM | 2537 | N   | LYS | 1748 | 15.570 | -11.745 | 2.432  | 1.00 | 24.13 |
| ATOM | 2539 | CA  | LYS | 1748 | 15.137 | -13.132 | 2.385  | 1.00 | 26.35 |
| ATOM | 2540 | CB  | LYS | 1748 | 14.502 | -13.424 | 1.024  | 1.00 | 27.52 |
| ATOM | 2541 | CG  | LYS | 1748 | 14.034 | -14.849 | 0.836  | 1.00 | 33.88 |
| ATOM | 2542 | CD  | LYS | 1748 | 13.598 | -15.062 | -0.600 | 1.00 | 41.83 |
| ATOM | 2543 | CE  | LYS | 1748 | 13.190 | -16.506 | -0.881 | 1.00 | 50.05 |
| ATOM | 2544 | NZ  | LYS | 1748 | 12.084 | -16.986 | 0.005  | 1.00 | 55.70 |
| ATOM | 2548 | C   | LYS | 1748 | 16.359 | -14.037 | 2.636  | 1.00 | 27.50 |
| ATOM | 2549 | O   | LYS | 1748 | 16.303 | -14.950 | 3.459  | 1.00 | 31.18 |
| ATOM | 2550 | N   | GLN | 1749 | 17.467 | -13.761 | 1.949  | 1.00 | 27.24 |
| ATOM | 2552 | CA  | GLN | 1749 | 18.699 | -14.529 | 2.122  | 1.00 | 27.03 |
| ATOM | 2553 | CB  | GLN | 1749 | 19.797 | -14.039 | 1.169  | 1.00 | 31.80 |
| ATOM | 2554 | CG  | GLN | 1749 | 19.501 | -14.196 | -0.323 | 1.00 | 38.57 |
| ATOM | 2555 | CD  | GLN | 1749 | 20.460 | -13.385 | -1.209 | 1.00 | 39.93 |
| ATOM | 2556 | OE1 | GLN | 1749 | 20.025 | -12.535 | -1.974 | 1.00 | 39.90 |
| ATOM | 2557 | NE2 | GLN | 1749 | 21.768 | -13.620 | -1.068 | 1.00 | 40.23 |
| ATOM | 2560 | C   | GLN | 1749 | 19.205 | -14.380 | 3.552  | 1.00 | 25.98 |
| ATOM | 2561 | O   | GLN | 1749 | 19.533 | -15.371 | 4.198  | 1.00 | 27.18 |
| ATOM | 2562 | N   | LEU | 1750 | 19.293 | -13.133 | 4.018  | 1.00 | 25.20 |
| ATOM | 2564 | CA  | LEU | 1750 | 19.774 | -12.823 | 5.369  | 1.00 | 25.74 |
| ATOM | 2565 | CB  | LEU | 1750 | 19.722 | -11.317 | 5.631  | 1.00 | 20.99 |
| ATOM | 2566 | CG  | LEU | 1750 | 20.708 | -10.468 | 4.831  | 1.00 | 20.90 |
| ATOM | 2567 | CD1 | LEU | 1750 | 20.302 | -8.987  | 4.822  | 1.00 | 19.88 |
| ATOM | 2568 | CD2 | LEU | 1750 | 22.071 | -10.643 | 5.426  | 1.00 | 17.26 |
| ATOM | 2569 | C   | LEU | 1750 | 18.985 | -13.555 | 6.441  | 1.00 | 27.10 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2570 | O   | LEU | 1750 | 19.553 | -14.094 | 7.392  | 1.00 | 27.89 |
| ATOM | 2571 | N   | VAL | 1751 | 17.672 | -13.598 | 6.265  | 1.00 | 29.40 |
| ATOM | 2573 | CA  | VAL | 1751 | 16.798 | -14.262 | 7.210  | 1.00 | 26.80 |
| ATOM | 2574 | CB  | VAL | 1751 | 15.324 | -14.030 | 6.843  | 1.00 | 26.94 |
| ATOM | 2575 | CG1 | VAL | 1751 | 14.429 | -14.941 | 7.657  | 1.00 | 29.93 |
| ATOM | 2576 | CG2 | VAL | 1751 | 14.941 | -12.575 | 7.117  | 1.00 | 24.10 |
| ATOM | 2577 | C   | VAL | 1751 | 17.136 | -15.745 | 7.228  | 1.00 | 27.80 |
| ATOM | 2578 | O   | VAL | 1751 | 17.223 | -16.359 | 8.285  | 1.00 | 26.77 |
| ATOM | 2579 | N   | GLU | 1752 | 17.408 | -16.300 | 6.056  | 1.00 | 32.26 |
| ATOM | 2581 | CA  | GLU | 1752 | 17.749 | -17.717 | 5.966  | 1.00 | 35.72 |
| ATOM | 2582 | CB  | GLU | 1752 | 17.721 | -18.173 | 4.504  | 1.00 | 39.33 |
| ATOM | 2583 | CG  | GLU | 1752 | 16.306 | -18.078 | 3.911  | 1.00 | 49.41 |
| ATOM | 2584 | CD  | GLU | 1752 | 16.209 | -18.421 | 2.429  | 1.00 | 55.88 |
| ATOM | 2585 | OE1 | GLU | 1752 | 15.141 | -18.138 | 1.835  | 1.00 | 58.00 |
| ATOM | 2586 | OE2 | GLU | 1752 | 17.180 | -18.978 | 1.863  | 1.00 | 61.03 |
| ATOM | 2587 | C   | GLU | 1752 | 19.093 | -18.002 | 6.635  | 1.00 | 34.59 |
| ATOM | 2588 | O   | GLU | 1752 | 19.230 | -18.975 | 7.393  | 1.00 | 33.95 |
| ATOM | 2589 | N   | ASP | 1753 | 20.057 | -17.114 | 6.401  | 1.00 | 34.38 |
| ATOM | 2591 | CA  | ASP | 1753 | 21.393 | -17.235 | 6.977  | 1.00 | 32.81 |
| ATOM | 2592 | CB  | ASP | 1753 | 22.338 | -16.227 | 6.334  | 1.00 | 31.57 |
| ATOM | 2593 | CG  | ASP | 1753 | 22.628 | -16.556 | 4.888  | 1.00 | 33.68 |
| ATOM | 2594 | OD1 | ASP | 1753 | 22.573 | -17.755 | 4.536  | 1.00 | 35.14 |
| ATOM | 2595 | OD2 | ASP | 1753 | 22.914 | -15.624 | 4.104  | 1.00 | 34.44 |
| ATOM | 2596 | C   | ASP | 1753 | 21.378 | -17.058 | 8.489  | 1.00 | 32.04 |
| ATOM | 2597 | O   | ASP | 1753 | 21.997 | -17.837 | 9.214  | 1.00 | 31.21 |
| ATOM | 2598 | N   | LEU | 1754 | 20.648 | -16.045 | 8.955  | 1.00 | 31.00 |
| ATOM | 2600 | CA  | LEU | 1754 | 20.528 | -15.754 | 10.382 | 1.00 | 29.46 |
| ATOM | 2601 | CB  | LEU | 1754 | 19.822 | -14.426 | 10.598 | 1.00 | 23.47 |
| ATOM | 2602 | CG  | LEU | 1754 | 20.816 | -13.309 | 10.318 | 1.00 | 23.58 |
| ATOM | 2603 | CD1 | LEU | 1754 | 20.114 | -11.963 | 10.128 | 1.00 | 20.46 |
| ATOM | 2604 | CD2 | LEU | 1754 | 21.828 | -13.282 | 11.462 | 1.00 | 19.18 |
| ATOM | 2605 | C   | LEU | 1754 | 19.806 | -16.866 | 11.110 | 1.00 | 31.84 |
| ATOM | 2606 | O   | LEU | 1754 | 20.125 | -17.178 | 12.254 | 1.00 | 30.78 |
| ATOM | 2607 | N   | ASP | 1755 | 18.832 | -17.471 | 10.445 | 1.00 | 34.03 |
| ATOM | 2609 | CA  | ASP | 1755 | 18.116 | -18.578 | 11.044 | 1.00 | 35.22 |
| ATOM | 2610 | CB  | ASP | 1755 | 16.973 | -19.027 | 10.148 | 1.00 | 38.40 |
| ATOM | 2611 | CG  | ASP | 1755 | 16.159 | -20.119 | 10.779 | 1.00 | 41.85 |
| ATOM | 2612 | OD1 | ASP | 1755 | 15.560 | -19.866 | 11.841 | 1.00 | 47.90 |
| ATOM | 2613 | OD2 | ASP | 1755 | 16.142 | -21.241 | 10.238 | 1.00 | 46.67 |
| ATOM | 2614 | C   | ASP | 1755 | 19.114 | -19.724 | 11.222 | 1.00 | 36.79 |
| ATOM | 2615 | O   | ASP | 1755 | 19.114 | -20.411 | 12.250 | 1.00 | 38.33 |
| ATOM | 2616 | N   | ARG | 1756 | 19.973 | -19.920 | 10.226 | 1.00 | 34.81 |
| ATOM | 2618 | CA  | ARG | 1756 | 20.982 | -20.969 | 10.302 | 1.00 | 34.68 |
| ATOM | 2619 | CB  | ARG | 1756 | 21.688 | -21.100 | 8.959  | 1.00 | 34.78 |
| ATOM | 2620 | CG  | ARG | 1756 | 22.746 | -22.179 | 8.910  | 1.00 | 35.93 |
| ATOM | 2621 | CD  | ARG | 1756 | 23.297 | -22.306 | 7.511  | 1.00 | 41.60 |
| ATOM | 2622 | NE  | ARG | 1756 | 23.786 | -21.025 | 6.999  | 1.00 | 46.42 |
| ATOM | 2624 | CZ  | ARG | 1756 | 24.889 | -20.419 | 7.427  | 1.00 | 48.38 |
| ATOM | 2625 | NH1 | ARG | 1756 | 25.637 | -20.976 | 8.381  | 1.00 | 48.10 |
| ATOM | 2628 | NH2 | ARG | 1756 | 25.236 | -19.242 | 6.909  | 1.00 | 46.62 |
| ATOM | 2631 | C   | ARG | 1756 | 22.002 | -20.666 | 11.399 | 1.00 | 36.17 |
| ATOM | 2632 | O   | ARG | 1756 | 22.372 | -21.541 | 12.177 | 1.00 | 38.33 |
| ATOM | 2633 | N   | ILE | 1757 | 22.433 | -19.413 | 11.478 | 1.00 | 37.00 |
| ATOM | 2635 | CA  | ILE | 1757 | 23.416 | -18.998 | 12.468 | 1.00 | 35.60 |

|      |      |     |     |      |        |         |        |      |        |
|------|------|-----|-----|------|--------|---------|--------|------|--------|
| ATOM | 2636 | CB  | ILE | 1757 | 23.964 | -17.588 | 12.141 | 1.00 | 35.54  |
| ATOM | 2637 | CG2 | ILE | 1757 | 24.921 | -17.131 | 13.217 | 1.00 | 32.41  |
| ATOM | 2638 | CG1 | ILE | 1757 | 24.693 | -17.612 | 10.794 | 1.00 | 33.77  |
| ATOM | 2639 | CD1 | ILE | 1757 | 25.097 | -16.253 | 10.287 | 1.00 | 33.49  |
| ATOM | 2640 | C   | ILE | 1757 | 22.866 | -19.048 | 13.891 | 1.00 | 37.28  |
| ATOM | 2641 | O   | ILE | 1757 | 23.531 | -19.556 | 14.779 | 1.00 | 38.42  |
| ATOM | 2642 | N   | VAL | 1758 | 21.634 | -18.585 | 14.088 | 1.00 | 39.19  |
| ATOM | 2644 | CA  | VAL | 1758 | 21.016 | -18.584 | 15.421 | 1.00 | 39.84  |
| ATOM | 2645 | CB  | VAL | 1758 | 19.560 | -18.017 | 15.403 | 1.00 | 37.62  |
| ATOM | 2646 | CG1 | VAL | 1758 | 18.918 | -18.144 | 16.773 | 1.00 | 38.30  |
| ATOM | 2647 | CG2 | VAL | 1758 | 19.560 | -16.560 | 15.009 | 1.00 | 39.62  |
| ATOM | 2648 | C   | VAL | 1758 | 20.983 | -19.997 | 15.988 | 1.00 | 41.98  |
| ATOM | 2649 | O   | VAL | 1758 | 21.380 | -20.229 | 17.128 | 1.00 | 43.36  |
| ATOM | 2650 | N   | ALA | 1759 | 20.501 | -20.932 | 15.182 | 1.00 | 43.31  |
| ATOM | 2652 | CA  | ALA | 1759 | 20.418 | -22.325 | 15.589 | 1.00 | 44.00  |
| ATOM | 2653 | CB  | ALA | 1759 | 19.836 | -23.150 | 14.459 | 1.00 | 44.52  |
| ATOM | 2654 | C   | ALA | 1759 | 21.784 | -22.867 | 15.976 | 1.00 | 45.98  |
| ATOM | 2655 | O   | ALA | 1759 | 21.894 | -23.725 | 16.841 | 1.00 | 48.78  |
| ATOM | 2656 | N   | LEU | 1760 | 22.823 | -22.375 | 15.319 | 1.00 | 48.93  |
| ATOM | 2658 | CA  | LEU | 1760 | 24.175 | -22.831 | 15.592 | 1.00 | 51.47  |
| ATOM | 2659 | CB  | LEU | 1760 | 24.954 | -22.900 | 14.280 | 1.00 | 53.63  |
| ATOM | 2660 | CG  | LEU | 1760 | 24.284 | -23.864 | 13.295 | 1.00 | 57.84  |
| ATOM | 2661 | CD1 | LEU | 1760 | 24.993 | -23.847 | 11.948 | 1.00 | 61.83  |
| ATOM | 2662 | CD2 | LEU | 1760 | 24.260 | -25.277 | 13.886 | 1.00 | 58.57  |
| ATOM | 2663 | C   | LEU | 1760 | 24.911 | -21.965 | 16.607 | 1.00 | 53.60  |
| ATOM | 2664 | O   | LEU | 1760 | 26.078 | -22.214 | 16.919 | 1.00 | 54.00  |
| ATOM | 2665 | N   | THR | 1761 | 24.222 | -20.963 | 17.141 | 1.00 | 55.77  |
| ATOM | 2667 | CA  | THR | 1761 | 24.820 | -20.060 | 18.111 | 1.00 | 56.64  |
| ATOM | 2668 | CB  | THR | 1761 | 24.250 | -18.627 | 17.979 | 1.00 | 55.76  |
| ATOM | 2669 | OG1 | THR | 1761 | 24.444 | -18.154 | 16.644 | 1.00 | 56.20  |
| ATOM | 2671 | CG2 | THR | 1761 | 24.962 | -17.680 | 18.917 | 1.00 | 55.25  |
| ATOM | 2672 | C   | THR | 1761 | 24.636 | -20.548 | 19.539 | 1.00 | 58.16  |
| ATOM | 2673 | O   | THR | 1761 | 23.566 | -21.021 | 19.919 | 1.00 | 56.85  |
| ATOM | 2674 | N   | SER | 1762 | 25.706 | -20.436 | 20.318 | 1.00 | 61.74  |
| ATOM | 2676 | CA  | SER | 1762 | 25.706 | -20.833 | 21.717 | 1.00 | 64.50  |
| ATOM | 2677 | CB  | SER | 1762 | 27.155 | -20.979 | 22.205 | 1.00 | 68.82  |
| ATOM | 2678 | OG  | SER | 1762 | 27.232 | -21.544 | 23.508 | 1.00 | 73.15  |
| ATOM | 2680 | C   | SER | 1762 | 24.965 | -19.775 | 22.547 | 1.00 | 63.87  |
| ATOM | 2681 | O   | SER | 1762 | 25.080 | -18.563 | 22.296 | 1.00 | 63.22  |
| ATOM | 3420 | PA  | PCP | 400  | 62.748 | 10.301  | 7.817  | 1.00 | 90.90  |
| ATOM | 3421 | O1A | PCP | 400  | 62.509 | 10.036  | 9.280  | 1.00 | 92.35  |
| ATOM | 3422 | O2A | PCP | 400  | 61.832 | 11.180  | 7.038  | 1.00 | 90.49  |
| ATOM | 3423 | O5* | PCP | 400  | 62.744 | 8.904   | 7.142  | 1.00 | 83.57  |
| ATOM | 3424 | PB  | PCP | 400  | 65.226 | 11.946  | 8.294  | 1.00 | 101.51 |
| ATOM | 3425 | O1B | PCP | 400  | 65.246 | 13.015  | 7.264  | 1.00 | 102.85 |
| ATOM | 3426 | O2B | PCP | 400  | 66.527 | 11.458  | 8.830  | 1.00 | 99.88  |
| ATOM | 3427 | O3A | PCP | 400  | 64.334 | 10.725  | 7.584  | 1.00 | 96.64  |
| ATOM | 3428 | C3B | PCP | 400  | 64.345 | 12.502  | 9.635  | 1.00 | 102.94 |
| ATOM | 3429 | C5* | PCP | 400  | 62.337 | 8.684   | 5.839  | 1.00 | 71.21  |
| ATOM | 3430 | C4* | PCP | 400  | 62.479 | 7.204   | 5.587  | 1.00 | 64.48  |
| ATOM | 3431 | O4* | PCP | 400  | 63.713 | 6.745   | 6.169  | 1.00 | 60.91  |
| ATOM | 3432 | C1* | PCP | 400  | 63.394 | 5.459   | 6.680  | 1.00 | 54.96  |
| ATOM | 3433 | N9  | PCP | 400  | 64.326 | 5.101   | 7.712  | 1.00 | 47.26  |
| ATOM | 3434 | C4  | PCP | 400  | 65.017 | 3.903   | 7.840  | 1.00 | 46.24  |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3435 | N3  | PCP | 400 | 64.926 | 2.770  | 7.062  | 1.00 | 41.02 |
| ATOM | 3436 | C2  | PCP | 400 | 65.802 | 1.878  | 7.531  | 1.00 | 40.72 |
| ATOM | 3437 | N1  | PCP | 400 | 66.674 | 1.917  | 8.558  | 1.00 | 37.37 |
| ATOM | 3438 | C6  | PCP | 400 | 66.735 | 3.028  | 9.305  | 1.00 | 40.23 |
| ATOM | 3439 | N6  | PCP | 400 | 67.573 | 3.134  | 10.333 | 1.00 | 33.92 |
| ATOM | 3442 | C5  | PCP | 400 | 65.862 | 4.091  | 8.937  | 1.00 | 44.12 |
| ATOM | 3443 | N7  | PCP | 400 | 65.674 | 5.361  | 9.472  | 1.00 | 45.15 |
| ATOM | 3444 | C8  | PCP | 400 | 64.761 | 5.894  | 8.702  | 1.00 | 44.83 |
| ATOM | 3445 | C2* | PCP | 400 | 61.986 | 5.500  | 7.254  | 1.00 | 57.63 |
| ATOM | 3446 | O2* | PCP | 400 | 61.454 | 4.153  | 7.211  | 1.00 | 56.45 |
| ATOM | 3448 | C3* | PCP | 400 | 61.328 | 6.402  | 6.245  | 1.00 | 61.31 |
| ATOM | 3449 | O3* | PCP | 400 | 60.689 | 5.644  | 5.206  | 1.00 | 64.65 |
| ATOM | 3451 | PA  | PCP | 401 | 9.366  | 9.801  | 17.743 | 0.50 | 74.43 |
| ATOM | 3452 | O1A | PCP | 401 | 9.463  | 8.736  | 16.709 | 0.50 | 75.37 |
| ATOM | 3453 | O2A | PCP | 401 | 10.330 | 10.926 | 17.699 | 0.50 | 75.86 |
| ATOM | 3454 | O5* | PCP | 401 | 9.427  | 9.108  | 19.186 | 0.50 | 67.44 |
| ATOM | 3455 | PB  | PCP | 401 | 6.878  | 10.679 | 16.547 | 0.50 | 82.27 |
| ATOM | 3456 | O1B | PCP | 401 | 6.223  | 11.982 | 16.778 | 0.50 | 82.91 |
| ATOM | 3457 | O2B | PCP | 401 | 6.020  | 9.486  | 16.408 | 0.50 | 82.70 |
| ATOM | 3458 | O3A | PCP | 401 | 7.868  | 10.423 | 17.814 | 0.50 | 78.30 |
| ATOM | 3459 | C3B | PCP | 401 | 7.790  | 10.845 | 15.159 | 0.50 | 82.50 |
| ATOM | 3460 | C5* | PCP | 401 | 10.184 | 9.593  | 20.275 | 0.50 | 54.44 |
| ATOM | 3461 | C4* | PCP | 401 | 10.228 | 8.637  | 21.442 | 0.50 | 45.38 |
| ATOM | 3462 | O4* | PCP | 401 | 9.032  | 7.855  | 21.412 | 0.50 | 39.40 |
| ATOM | 3463 | C1* | PCP | 401 | 9.397  | 6.509  | 21.641 | 0.50 | 35.00 |
| ATOM | 3464 | N9  | PCP | 401 | 8.386  | 5.627  | 21.044 | 0.50 | 27.91 |
| ATOM | 3465 | C4  | PCP | 401 | 7.790  | 4.469  | 21.564 | 0.50 | 23.36 |
| ATOM | 3466 | N3  | PCP | 401 | 7.982  | 3.849  | 22.732 | 0.50 | 22.33 |
| ATOM | 3467 | C2  | PCP | 401 | 7.239  | 2.768  | 22.838 | 0.50 | 20.26 |
| ATOM | 3468 | N1  | PCP | 401 | 6.382  | 2.251  | 22.003 | 0.50 | 17.29 |
| ATOM | 3469 | C6  | PCP | 401 | 6.202  | 2.877  | 20.856 | 0.50 | 19.35 |
| ATOM | 3470 | N6  | PCP | 401 | 5.327  | 2.415  | 19.975 | 0.50 | 16.87 |
| ATOM | 3473 | C5  | PCP | 401 | 6.932  | 4.038  | 20.603 | 0.50 | 21.72 |
| ATOM | 3474 | N7  | PCP | 401 | 6.983  | 4.880  | 19.507 | 0.50 | 24.59 |
| ATOM | 3475 | C8  | PCP | 401 | 7.847  | 5.786  | 19.832 | 0.50 | 24.26 |
| ATOM | 3476 | C2* | PCP | 401 | 10.762 | 6.409  | 20.931 | 0.50 | 39.01 |
| ATOM | 3477 | O2* | PCP | 401 | 11.609 | 5.326  | 21.412 | 0.50 | 43.88 |
| ATOM | 3479 | C3* | PCP | 401 | 11.396 | 7.674  | 21.373 | 0.50 | 42.14 |
| ATOM | 3480 | O3* | PCP | 401 | 11.918 | 7.515  | 22.681 | 0.50 | 44.21 |
| ATOM | 3482 | N   | SER | 461 | 78.844 | 26.057 | 14.057 | 1.00 | 43.87 |
| ATOM | 3484 | CA  | SER | 461 | 79.399 | 24.884 | 13.385 | 1.00 | 43.50 |
| ATOM | 3485 | CB  | SER | 461 | 78.488 | 23.655 | 13.616 | 1.00 | 39.99 |
| ATOM | 3486 | C   | SER | 461 | 79.572 | 25.181 | 11.888 | 1.00 | 42.14 |
| ATOM | 3487 | O   | SER | 461 | 79.473 | 24.292 | 11.038 | 1.00 | 40.29 |
| ATOM | 3488 | N   | GLU | 462 | 79.883 | 26.441 | 11.594 | 1.00 | 43.19 |
| ATOM | 3490 | CA  | GLU | 462 | 80.061 | 26.951 | 10.233 | 1.00 | 42.77 |
| ATOM | 3491 | CB  | GLU | 462 | 80.303 | 28.446 | 10.250 | 1.00 | 47.75 |
| ATOM | 3492 | CG  | GLU | 462 | 79.209 | 29.301 | 10.860 | 1.00 | 60.57 |
| ATOM | 3493 | CD  | GLU | 462 | 79.647 | 30.752 | 11.061 | 1.00 | 67.56 |
| ATOM | 3494 | OE1 | GLU | 462 | 80.866 | 31.016 | 10.994 | 1.00 | 67.47 |
| ATOM | 3495 | OE2 | GLU | 462 | 78.764 | 31.611 | 11.296 | 1.00 | 72.32 |
| ATOM | 3496 | C   | GLU | 462 | 81.207 | 26.357 | 9.457  | 1.00 | 39.55 |
| ATOM | 3497 | O   | GLU | 462 | 81.051 | 26.032 | 8.292  | 1.00 | 38.74 |
| ATOM | 3498 | N   | TYR | 463 | 82.375 | 26.299 | 10.091 | 1.00 | 36.47 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3500 | CA  | TYR | 463 | 83.567 | 25.806 | 9.420  | 1.00 | 34.19 |
| ATOM | 3501 | CB  | TYR | 463 | 84.702 | 26.828 | 9.505  | 1.00 | 35.55 |
| ATOM | 3502 | CG  | TYR | 463 | 84.393 | 28.059 | 8.675  | 1.00 | 42.11 |
| ATOM | 3503 | CD1 | TYR | 463 | 84.004 | 29.264 | 9.283  | 1.00 | 43.15 |
| ATOM | 3504 | CE1 | TYR | 463 | 83.619 | 30.361 | 8.513  | 1.00 | 42.40 |
| ATOM | 3505 | CD2 | TYR | 463 | 84.395 | 27.990 | 7.280  | 1.00 | 39.78 |
| ATOM | 3506 | CE2 | TYR | 463 | 84.012 | 29.078 | 6.509  | 1.00 | 39.04 |
| ATOM | 3507 | CZ  | TYR | 463 | 83.625 | 30.256 | 7.129  | 1.00 | 39.86 |
| ATOM | 3508 | OH  | TYR | 463 | 83.260 | 31.330 | 6.366  | 1.00 | 42.58 |
| ATOM | 3510 | C   | TYR | 463 | 84.055 | 24.434 | 9.800  | 1.00 | 33.28 |
| ATOM | 3511 | O   | TYR | 463 | 84.739 | 23.781 | 9.005  | 1.00 | 33.47 |
| ATOM | 3512 | N   | GLU | 464 | 83.695 | 23.976 | 10.993 | 1.00 | 34.42 |
| ATOM | 3514 | CA  | GLU | 464 | 84.117 | 22.660 | 11.444 | 1.00 | 36.38 |
| ATOM | 3515 | CB  | GLU | 464 | 85.618 | 22.663 | 11.750 | 1.00 | 40.90 |
| ATOM | 3516 | CG  | GLU | 464 | 86.041 | 23.755 | 12.729 | 1.00 | 46.29 |
| ATOM | 3517 | CD  | GLU | 464 | 87.548 | 23.810 | 12.943 | 1.00 | 51.33 |
| ATOM | 3518 | OE1 | GLU | 464 | 87.970 | 24.247 | 14.038 | 1.00 | 54.49 |
| ATOM | 3519 | OE2 | GLU | 464 | 88.312 | 23.430 | 12.025 | 1.00 | 53.18 |
| ATOM | 3520 | C   | GLU | 464 | 83.374 | 22.224 | 12.678 | 1.00 | 35.64 |
| ATOM | 3521 | O   | GLU | 464 | 83.111 | 23.052 | 13.555 | 1.00 | 37.40 |
| ATOM | 3522 | N   | LEU | 465 | 82.962 | 20.955 | 12.711 | 1.00 | 34.21 |
| ATOM | 3524 | CA  | LEU | 465 | 82.267 | 20.429 | 13.887 | 1.00 | 34.92 |
| ATOM | 3525 | CB  | LEU | 465 | 81.285 | 19.300 | 13.542 | 1.00 | 31.30 |
| ATOM | 3526 | CG  | LEU | 465 | 80.272 | 19.381 | 12.405 | 1.00 | 32.22 |
| ATOM | 3527 | CD1 | LEU | 465 | 79.152 | 18.407 | 12.720 | 1.00 | 21.95 |
| ATOM | 3528 | CD2 | LEU | 465 | 79.738 | 20.802 | 12.212 | 1.00 | 29.75 |
| ATOM | 3529 | C   | LEU | 465 | 83.326 | 19.855 | 14.814 | 1.00 | 36.17 |
| ATOM | 3530 | O   | LEU | 465 | 84.473 | 19.621 | 14.400 | 1.00 | 35.80 |
| ATOM | 3531 | N   | PRO | 466 | 82.970 | 19.629 | 16.083 | 1.00 | 36.20 |
| ATOM | 3532 | CD  | PRO | 466 | 81.722 | 20.018 | 16.758 | 1.00 | 38.17 |
| ATOM | 3533 | CA  | PRO | 466 | 83.925 | 19.072 | 17.037 | 1.00 | 36.06 |
| ATOM | 3534 | CB  | PRO | 466 | 83.132 | 19.035 | 18.333 | 1.00 | 35.57 |
| ATOM | 3535 | CG  | PRO | 466 | 82.185 | 20.194 | 18.171 | 1.00 | 38.67 |
| ATOM | 3536 | C   | PRO | 466 | 84.294 | 17.666 | 16.605 | 1.00 | 37.06 |
| ATOM | 3537 | O   | PRO | 466 | 83.498 | 16.959 | 15.979 | 1.00 | 34.50 |
| ATOM | 3538 | N   | GLU | 467 | 85.504 | 17.258 | 16.936 | 1.00 | 39.97 |
| ATOM | 3540 | CA  | GLU | 467 | 85.951 | 15.932 | 16.587 | 1.00 | 44.69 |
| ATOM | 3541 | CB  | GLU | 467 | 87.412 | 15.985 | 16.151 | 1.00 | 50.43 |
| ATOM | 3542 | CG  | GLU | 467 | 87.902 | 14.695 | 15.518 | 1.00 | 60.27 |
| ATOM | 3543 | CD  | GLU | 467 | 89.321 | 14.796 | 14.986 | 1.00 | 65.75 |
| ATOM | 3544 | OE1 | GLU | 467 | 90.024 | 15.804 | 15.269 | 1.00 | 64.40 |
| ATOM | 3545 | OE2 | GLU | 467 | 89.726 | 13.850 | 14.275 | 1.00 | 71.13 |
| ATOM | 3546 | C   | GLU | 467 | 85.775 | 15.002 | 17.783 | 1.00 | 43.30 |
| ATOM | 3547 | O   | GLU | 467 | 85.888 | 15.428 | 18.936 | 1.00 | 43.26 |
| ATOM | 3548 | N   | ASP | 468 | 85.433 | 13.750 | 17.504 | 1.00 | 43.09 |
| ATOM | 3550 | CA  | ASP | 468 | 85.254 | 12.739 | 18.545 | 1.00 | 44.15 |
| ATOM | 3551 | CB  | ASP | 468 | 83.785 | 12.614 | 18.979 | 1.00 | 44.54 |
| ATOM | 3552 | CG  | ASP | 468 | 83.574 | 11.562 | 20.072 | 1.00 | 41.84 |
| ATOM | 3553 | OD1 | ASP | 468 | 82.405 | 11.244 | 20.368 | 1.00 | 39.81 |
| ATOM | 3554 | OD2 | ASP | 468 | 84.570 | 11.057 | 20.636 | 1.00 | 42.92 |
| ATOM | 3555 | C   | ASP | 468 | 85.746 | 11.422 | 17.970 | 1.00 | 44.66 |
| ATOM | 3556 | O   | ASP | 468 | 84.982 | 10.663 | 17.368 | 1.00 | 44.56 |
| ATOM | 3557 | N   | PRO | 469 | 87.034 | 11.126 | 18.176 | 1.00 | 44.56 |
| ATOM | 3558 | CD  | PRO | 469 | 87.953 | 11.959 | 18.971 | 1.00 | 45.43 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3559 | CA  | PRO | 469 | 87.707 | 9.916  | 17.707 | 1.00 | 43.90 |
| ATOM | 3560 | CB  | PRO | 469 | 89.024 | 9.959  | 18.476 | 1.00 | 45.66 |
| ATOM | 3561 | CG  | PRO | 469 | 89.300 | 11.438 | 18.547 | 1.00 | 44.89 |
| ATOM | 3562 | C   | PRO | 469 | 86.934 | 8.627  | 17.971 | 1.00 | 42.60 |
| ATOM | 3563 | O   | PRO | 469 | 86.935 | 7.730  | 17.139 | 1.00 | 41.35 |
| ATOM | 3564 | N   | ARG | 470 | 86.229 | 8.569  | 19.096 | 1.00 | 43.25 |
| ATOM | 3566 | CA  | ARG | 470 | 85.460 | 7.380  | 19.470 | 1.00 | 44.81 |
| ATOM | 3567 | CB  | ARG | 470 | 84.722 | 7.612  | 20.789 | 1.00 | 48.36 |
| ATOM | 3568 | CG  | ARG | 470 | 85.579 | 8.201  | 21.889 | 1.00 | 53.41 |
| ATOM | 3569 | CD  | ARG | 470 | 84.764 | 8.458  | 23.138 | 1.00 | 55.42 |
| ATOM | 3570 | NE  | ARG | 470 | 83.581 | 9.261  | 22.861 | 1.00 | 58.57 |
| ATOM | 3572 | CZ  | ARG | 470 | 82.748 | 9.712  | 23.791 | 1.00 | 62.24 |
| ATOM | 3573 | NH1 | ARG | 470 | 82.972 | 9.445  | 25.077 | 1.00 | 64.57 |
| ATOM | 3576 | NH2 | ARG | 470 | 81.670 | 10.398 | 23.436 | 1.00 | 63.66 |
| ATOM | 3579 | C   | ARG | 470 | 84.439 | 6.924  | 18.437 | 1.00 | 43.69 |
| ATOM | 3580 | O   | ARG | 470 | 84.166 | 5.735  | 18.313 | 1.00 | 45.68 |
| ATOM | 3581 | N   | TRP | 471 | 83.879 | 7.866  | 17.693 | 1.00 | 42.41 |
| ATOM | 3583 | CA  | TRP | 471 | 82.851 | 7.534  | 16.720 | 1.00 | 38.92 |
| ATOM | 3584 | CB  | TRP | 471 | 81.577 | 8.268  | 17.095 | 1.00 | 35.80 |
| ATOM | 3585 | CG  | TRP | 471 | 80.967 | 7.741  | 18.335 | 1.00 | 37.13 |
| ATOM | 3586 | CD2 | TRP | 471 | 80.158 | 6.569  | 18.443 | 1.00 | 37.26 |
| ATOM | 3587 | CE2 | TRP | 471 | 79.723 | 6.483  | 19.785 | 1.00 | 38.20 |
| ATOM | 3588 | CE3 | TRP | 471 | 79.748 | 5.582  | 17.530 | 1.00 | 35.59 |
| ATOM | 3589 | CD1 | TRP | 471 | 81.010 | 8.300  | 19.584 | 1.00 | 36.42 |
| ATOM | 3590 | NE1 | TRP | 471 | 80.260 | 7.553  | 20.462 | 1.00 | 35.89 |
| ATOM | 3592 | CZ2 | TRP | 471 | 78.896 | 5.454  | 20.239 | 1.00 | 36.18 |
| ATOM | 3593 | CZ3 | TRP | 471 | 78.934 | 4.561  | 17.978 | 1.00 | 32.81 |
| ATOM | 3594 | CH2 | TRP | 471 | 78.514 | 4.505  | 19.321 | 1.00 | 34.82 |
| ATOM | 3595 | C   | TRP | 471 | 83.175 | 7.845  | 15.277 | 1.00 | 39.77 |
| ATOM | 3596 | O   | TRP | 471 | 82.478 | 7.391  | 14.362 | 1.00 | 39.56 |
| ATOM | 3597 | N   | GLU | 472 | 84.224 | 8.628  | 15.075 | 1.00 | 39.37 |
| ATOM | 3599 | CA  | GLU | 472 | 84.605 | 9.043  | 12.739 | 1.00 | 38.42 |
| ATOM | 3600 | CB  | GLU | 472 | 85.794 | 9.994  | 13.812 | 1.00 | 37.11 |
| ATOM | 3601 | CG  | GLU | 472 | 85.958 | 10.849 | 12.582 | 1.00 | 34.11 |
| ATOM | 3602 | CD  | GLU | 472 | 84.772 | 11.757 | 12.338 | 1.00 | 34.03 |
| ATOM | 3603 | OE1 | GLU | 472 | 84.260 | 12.348 | 13.317 | 1.00 | 31.87 |
| ATOM | 3604 | OE2 | GLU | 472 | 84.367 | 11.885 | 11.163 | 1.00 | 32.11 |
| ATOM | 3605 | C   | GLU | 472 | 84.910 | 7.901  | 12.791 | 1.00 | 39.78 |
| ATOM | 3606 | O   | GLU | 472 | 85.656 | 6.975  | 13.128 | 1.00 | 41.64 |
| ATOM | 3607 | N   | LEU | 473 | 84.303 | 7.958  | 11.610 | 1.00 | 37.71 |
| ATOM | 3609 | CA  | LEU | 473 | 84.538 | 6.957  | 10.590 | 1.00 | 36.94 |
| ATOM | 3610 | CB  | LEU | 473 | 83.258 | 6.196  | 10.265 | 1.00 | 35.38 |
| ATOM | 3611 | CG  | LEU | 473 | 83.438 | 5.065  | 9.236  | 1.00 | 37.67 |
| ATOM | 3612 | CD1 | LEU | 473 | 84.070 | 3.845  | 9.903  | 1.00 | 37.28 |
| ATOM | 3613 | CD2 | LEU | 473 | 82.106 | 4.687  | 8.598  | 1.00 | 37.87 |
| ATOM | 3614 | C   | LEU | 473 | 85.035 | 7.664  | 9.330  | 1.00 | 39.31 |
| ATOM | 3615 | O   | LEU | 473 | 84.484 | 8.697  | 8.938  | 1.00 | 40.55 |
| ATOM | 3616 | N   | PRO | 474 | 86.140 | 7.164  | 8.732  | 1.00 | 39.20 |
| ATOM | 3617 | CD  | PRO | 474 | 87.052 | 6.170  | 9.327  | 1.00 | 37.83 |
| ATOM | 3618 | CA  | PRO | 474 | 86.735 | 7.716  | 7.513  | 1.00 | 38.53 |
| ATOM | 3619 | CB  | PRO | 474 | 87.914 | 6.777  | 7.282  | 1.00 | 37.16 |
| ATOM | 3620 | CG  | PRO | 474 | 88.355 | 6.488  | 8.644  | 1.00 | 34.42 |
| ATOM | 3621 | C   | PRO | 474 | 85.733 | 7.607  | 6.370  | 1.00 | 40.25 |
| ATOM | 3622 | O   | PRO | 474 | 85.220 | 6.523  | 6.098  | 1.00 | 40.70 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3623 | N   | ARG | 475 | 85.492 | 8.723  | 5.685  | 1.00 | 41.09 |
| ATOM | 3625 | CA  | ARG | 475 | 84.534 | 8.746  | 4.590  | 1.00 | 42.26 |
| ATOM | 3626 | CB  | ARG | 475 | 84.487 | 10.132 | 3.948  | 1.00 | 39.19 |
| ATOM | 3627 | CG  | ARG | 475 | 83.957 | 11.199 | 4.876  | 1.00 | 35.19 |
| ATOM | 3628 | CD  | ARG | 475 | 84.074 | 12.593 | 4.301  | 1.00 | 30.76 |
| ATOM | 3629 | NE  | ARG | 475 | 83.796 | 13.567 | 5.345  | 1.00 | 22.86 |
| ATOM | 3631 | CZ  | ARG | 475 | 82.581 | 13.898 | 5.748  | 1.00 | 21.99 |
| ATOM | 3632 | NH1 | ARG | 475 | 81.529 | 13.350 | 5.165  | 1.00 | 23.39 |
| ATOM | 3635 | NH2 | ARG | 475 | 82.412 | 14.662 | 6.813  | 1.00 | 22.55 |
| ATOM | 3638 | C   | ARG | 475 | 84.838 | 7.692  | 3.538  | 1.00 | 45.38 |
| ATOM | 3639 | O   | ARG | 475 | 83.927 | 7.182  | 2.892  | 1.00 | 47.15 |
| ATOM | 3640 | N   | ASP | 476 | 86.106 | 7.319  | 3.390  | 1.00 | 47.13 |
| ATOM | 3642 | CA  | ASP | 476 | 86.461 | 6.325  | 2.387  | 1.00 | 51.33 |
| ATOM | 3643 | CB  | ASP | 476 | 87.973 | 6.294  | 2.134  | 1.00 | 55.23 |
| ATOM | 3644 | CG  | ASP | 476 | 88.768 | 5.841  | 3.340  | 1.00 | 61.15 |
| ATOM | 3645 | OD1 | ASP | 476 | 88.863 | 4.617  | 3.573  | 1.00 | 65.55 |
| ATOM | 3646 | OD2 | ASP | 476 | 89.331 | 6.713  | 4.036  | 1.00 | 65.78 |
| ATOM | 3647 | C   | ASP | 476 | 85.932 | 4.940  | 2.746  | 1.00 | 52.35 |
| ATOM | 3648 | C   | ASP | 476 | 85.815 | 4.063  | 1.885  | 1.00 | 55.49 |
| ATOM | 3649 | N   | ARG | 477 | 85.609 | 4.752  | 4.021  | 1.00 | 50.77 |
| ATOM | 3651 | CA  | ARG | 477 | 85.080 | 3.482  | 4.508  | 1.00 | 48.65 |
| ATOM | 3652 | CB  | ARG | 477 | 85.612 | 3.208  | 5.908  | 1.00 | 50.02 |
| ATOM | 3653 | CG  | ARG | 477 | 87.067 | 2.799  | 5.881  | 1.00 | 55.33 |
| ATOM | 3654 | CD  | ARG | 477 | 87.760 | 3.030  | 7.201  | 1.00 | 60.38 |
| ATOM | 3655 | NE  | ARG | 477 | 87.238 | 2.207  | 8.285  | 1.00 | 64.36 |
| ATOM | 3657 | CZ  | ARG | 477 | 87.748 | 2.203  | 9.513  | 1.00 | 69.16 |
| ATOM | 3658 | NH1 | ARG | 477 | 88.794 | 2.968  | 9.814  | 1.00 | 70.73 |
| ATOM | 3661 | NH2 | ARG | 477 | 87.190 | 1.459  | 10.459 | 1.00 | 71.59 |
| ATOM | 3664 | C   | ARG | 477 | 83.546 | 3.414  | 4.484  | 1.00 | 45.25 |
| ATOM | 3665 | O   | ARG | 477 | 82.957 | 2.481  | 5.013  | 1.00 | 46.36 |
| ATOM | 3666 | N   | LEU | 478 | 82.913 | 4.372  | 3.815  | 1.00 | 42.23 |
| ATOM | 3668 | CA  | LEU | 478 | 81.464 | 4.418  | 3.743  | 1.00 | 38.89 |
| ATOM | 3669 | CB  | LEU | 478 | 80.938 | 5.537  | 4.657  | 1.00 | 37.17 |
| ATOM | 3670 | CG  | LEU | 478 | 79.418 | 5.733  | 4.678  | 1.00 | 34.13 |
| ATOM | 3671 | CD1 | LEU | 478 | 78.777 | 4.723  | 5.609  | 1.00 | 32.24 |
| ATOM | 3672 | CD2 | LEU | 478 | 79.074 | 7.133  | 5.101  | 1.00 | 33.15 |
| ATOM | 3673 | C   | LEU | 478 | 81.059 | 4.697  | 2.303  | 1.00 | 38.34 |
| ATOM | 3674 | O   | LEU | 478 | 81.515 | 5.671  | 1.711  | 1.00 | 40.88 |
| ATOM | 3675 | N   | VAL | 479 | 80.208 | 3.850  | 1.738  | 1.00 | 37.34 |
| ATOM | 3677 | CA  | VAL | 479 | 79.763 | 4.042  | 0.364  | 1.00 | 37.61 |
| ATOM | 3678 | CB  | VAL | 479 | 80.105 | 2.829  | -0.563 | 1.00 | 36.57 |
| ATOM | 3679 | CG1 | VAL | 479 | 79.647 | 3.105  | -1.994 | 1.00 | 31.59 |
| ATOM | 3680 | CG2 | VAL | 479 | 81.608 | 2.567  | -0.561 | 1.00 | 36.11 |
| ATOM | 3681 | C   | VAL | 479 | 78.267 | 4.277  | 0.375  | 1.00 | 39.24 |
| ATOM | 3682 | O   | VAL | 479 | 77.484 | 3.358  | 0.619  | 1.00 | 39.16 |
| ATOM | 3683 | N   | LEU | 480 | 77.894 | 5.528  | 0.142  | 1.00 | 41.32 |
| ATOM | 3685 | CA  | LEU | 480 | 76.505 | 5.960  | 0.123  | 1.00 | 41.60 |
| ATOM | 3686 | CB  | LEU | 480 | 76.446 | 7.480  | -0.008 | 1.00 | 41.31 |
| ATOM | 3687 | CG  | LEU | 480 | 77.129 | 8.257  | 1.118  | 1.00 | 39.82 |
| ATOM | 3688 | CD1 | LEU | 480 | 76.985 | 9.737  | 0.856  | 1.00 | 37.96 |
| ATOM | 3689 | CD2 | LEU | 480 | 76.512 | 7.887  | 2.458  | 1.00 | 37.70 |
| ATOM | 3690 | C   | LEU | 480 | 75.733 | 5.312  | -1.015 | 1.00 | 41.85 |
| ATOM | 3691 | O   | LEU | 480 | 76.235 | 5.224  | -2.131 | 1.00 | 45.02 |
| ATOM | 3692 | N   | GLY | 481 | 74.501 | 4.897  | -0.727 | 1.00 | 40.86 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3694 | CA  | GLY | 481 | 73.673 | 4.247  | -1.727 | 1.00 | 40.21 |
| ATOM | 3695 | C   | GLY | 481 | 72.270 | 4.806  | -1.873 | 1.00 | 39.78 |
| ATOM | 3696 | O   | GLY | 481 | 72.058 | 6.015  | -1.810 | 1.00 | 41.68 |
| ATOM | 3697 | N   | LYS | 482 | 71.306 | 3.914  | -2.063 | 1.00 | 39.98 |
| ATOM | 3699 | CA  | LYS | 482 | 69.910 | 4.297  | -2.249 | 1.00 | 42.13 |
| ATOM | 3700 | CB  | LYS | 482 | 69.061 | 3.056  | -2.566 | 1.00 | 42.73 |
| ATOM | 3701 | C   | LYS | 482 | 69.284 | 5.050  | -1.084 | 1.00 | 43.13 |
| ATOM | 3702 | O   | LYS | 482 | 69.373 | 4.625  | 0.060  | 1.00 | 44.49 |
| ATOM | 3703 | N   | PRO | 483 | 68.676 | 6.204  | -1.358 | 1.00 | 43.22 |
| ATOM | 3704 | CD  | PRO | 483 | 68.708 | 6.969  | -2.613 | 1.00 | 44.40 |
| ATOM | 3705 | CA  | PRO | 483 | 68.044 | 6.973  | -0.290 | 1.00 | 45.44 |
| ATOM | 3706 | CB  | PRO | 483 | 67.701 | 8.295  | -0.980 | 1.00 | 45.01 |
| ATOM | 3707 | CG  | PRO | 483 | 67.573 | 7.923  | -2.414 | 1.00 | 43.95 |
| ATOM | 3708 | C   | PRO | 483 | 66.801 | 6.261  | 0.232  | 1.00 | 47.67 |
| ATOM | 3709 | O   | PRO | 483 | 66.012 | 5.725  | -0.547 | 1.00 | 46.76 |
| ATOM | 3710 | N   | LEU | 484 | 66.650 | 6.242  | 1.552  | 1.00 | 49.68 |
| ATOM | 3712 | CA  | LEU | 484 | 65.514 | 5.598  | 2.196  | 1.00 | 54.51 |
| ATOM | 3713 | CB  | LEU | 484 | 65.935 | 5.026  | 3.555  | 1.00 | 52.70 |
| ATOM | 3714 | CG  | LEU | 484 | 67.132 | 4.066  | 3.530  | 1.00 | 51.83 |
| ATOM | 3715 | CD1 | LEU | 484 | 67.620 | 3.766  | 4.933  | 1.00 | 50.19 |
| ATOM | 3716 | CD2 | LEU | 484 | 66.755 | 2.788  | 2.825  | 1.00 | 52.22 |
| ATOM | 3717 | C   | LEU | 484 | 64.317 | 6.554  | 2.357  | 1.00 | 58.82 |
| ATOM | 3718 | O   | LEU | 484 | 63.158 | 6.138  | 2.244  | 1.00 | 60.07 |
| ATOM | 3719 | N   | GLY | 485 | 64.599 | 7.831  | 2.609  | 1.00 | 61.91 |
| ATOM | 3721 | CA  | GLY | 485 | 63.538 | 8.810  | 2.778  | 1.00 | 65.89 |
| ATOM | 3722 | C   | GLY | 485 | 64.057 | 10.167 | 3.227  | 1.00 | 69.46 |
| ATOM | 3723 | O   | GLY | 485 | 65.230 | 10.301 | 3.597  | 1.00 | 70.65 |
| ATOM | 3724 | N   | GLU | 486 | 63.178 | 11.165 | 3.241  | 1.00 | 70.72 |
| ATOM | 3726 | CA  | GLU | 486 | 63.563 | 12.521 | 3.624  | 1.00 | 71.32 |
| ATOM | 3727 | CB  | GLU | 486 | 64.015 | 13.298 | 2.389  | 1.00 | 73.69 |
| ATOM | 3728 | C   | GLU | 486 | 62.435 | 13.269 | 4.312  | 1.00 | 70.93 |
| ATOM | 3729 | O   | GLU | 486 | 61.281 | 12.846 | 4.275  | 1.00 | 71.58 |
| ATOM | 3730 | N   | GLY | 487 | 62.781 | 14.404 | 4.909  | 1.00 | 70.10 |
| ATOM | 3732 | CA  | GLY | 487 | 61.798 | 15.211 | 5.603  | 1.00 | 68.11 |
| ATOM | 3733 | C   | GLY | 487 | 62.218 | 16.669 | 5.598  | 1.00 | 67.97 |
| ATOM | 3734 | O   | GLY | 487 | 62.938 | 17.109 | 4.696  | 1.00 | 67.68 |
| ATOM | 3735 | N   | ALA | 488 | 61.780 | 17.409 | 6.615  | 1.00 | 67.26 |
| ATOM | 3737 | CA  | ALA | 488 | 62.106 | 18.826 | 6.737  | 1.00 | 66.90 |
| ATOM | 3738 | CB  | ALA | 488 | 61.362 | 19.428 | 7.909  | 1.00 | 68.72 |
| ATOM | 3739 | C   | ALA | 488 | 63.607 | 19.004 | 6.921  | 1.00 | 67.08 |
| ATOM | 3740 | O   | ALA | 488 | 64.124 | 18.867 | 8.037  | 1.00 | 65.97 |
| ATOM | 3741 | N   | PHE | 489 | 64.297 | 19.248 | 5.806  | 1.00 | 66.76 |
| ATOM | 3743 | CA  | PHE | 489 | 65.754 | 19.439 | 5.773  | 1.00 | 65.91 |
| ATOM | 3744 | CB  | PHE | 489 | 66.134 | 20.794 | 6.379  | 1.00 | 66.45 |
| ATOM | 3745 | C   | PHE | 489 | 66.563 | 18.288 | 6.414  | 1.00 | 63.92 |
| ATOM | 3746 | O   | PHE | 489 | 67.622 | 18.503 | 7.031  | 1.00 | 63.16 |
| ATOM | 3747 | N   | GLY | 490 | 66.067 | 17.069 | 6.209  | 1.00 | 59.03 |
| ATOM | 3749 | CA  | GLY | 490 | 66.710 | 15.878 | 6.720  | 1.00 | 51.12 |
| ATOM | 3750 | C   | GLY | 490 | 66.619 | 14.823 | 5.638  | 1.00 | 48.59 |
| ATOM | 3751 | O   | GLY | 490 | 65.608 | 14.736 | 4.938  | 1.00 | 45.25 |
| ATOM | 3752 | N   | GLN | 491 | 67.659 | 14.003 | 5.525  | 1.00 | 48.77 |
| ATOM | 3754 | CA  | GLN | 491 | 67.732 | 12.951 | 4.519  | 1.00 | 47.40 |
| ATOM | 3755 | CB  | GLN | 491 | 68.529 | 13.474 | 3.319  | 1.00 | 49.92 |
| ATOM | 3756 | CG  | GLN | 491 | 68.653 | 12.514 | 2.155  | 1.00 | 56.31 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3757 | CD  | GLN | 491 | 69.604 | 13.020 | 1.088  | 1.00 | 58.79 |
| ATOM | 3758 | OE1 | GLN | 491 | 70.043 | 14.171 | 1.130  | 1.00 | 59.63 |
| ATOM | 3759 | NE2 | GLN | 491 | 69.929 | 12.161 | 0.122  | 1.00 | 59.05 |
| ATOM | 3762 | C   | GLN | 491 | 68.407 | 11.693 | 5.086  | 1.00 | 44.46 |
| ATOM | 3763 | O   | GLN | 491 | 69.396 | 11.782 | 5.806  | 1.00 | 44.15 |
| ATOM | 3764 | N   | VAL | 492 | 67.867 | 10.527 | 4.752  | 1.00 | 42.55 |
| ATOM | 3766 | CA  | VAL | 492 | 68.416 | 9.247  | 5.205  | 1.00 | 39.22 |
| ATOM | 3767 | CB  | VAL | 492 | 67.375 | 8.458  | 6.042  | 1.00 | 39.40 |
| ATOM | 3768 | CG1 | VAL | 492 | 67.947 | 7.127  | 6.524  | 1.00 | 40.17 |
| ATOM | 3769 | CG2 | VAL | 492 | 66.922 | 9.267  | 7.210  | 1.00 | 36.12 |
| ATOM | 3770 | C   | VAL | 492 | 68.746 | 8.396  | 3.975  | 1.00 | 37.57 |
| ATOM | 3771 | O   | VAL | 492 | 67.888 | 8.178  | 3.115  | 1.00 | 35.70 |
| ATOM | 3772 | N   | VAL | 493 | 69.990 | 7.961  | 3.845  | 1.00 | 36.27 |
| ATOM | 3774 | CA  | VAL | 493 | 70.333 | 7.127  | 2.711  | 1.00 | 37.61 |
| ATOM | 3775 | CB  | VAL | 493 | 71.237 | 7.863  | 1.643  | 1.00 | 37.45 |
| ATOM | 3776 | CG1 | VAL | 493 | 70.836 | 9.319  | 1.524  | 1.00 | 38.29 |
| ATOM | 3777 | CG2 | VAL | 493 | 72.717 | 7.713  | 1.943  | 1.00 | 36.53 |
| ATOM | 3778 | C   | VAL | 493 | 70.952 | 5.806  | 3.156  | 1.00 | 37.54 |
| ATOM | 3779 | O   | VAL | 493 | 71.542 | 5.711  | 4.223  | 1.00 | 37.32 |
| ATOM | 3780 | N   | LEU | 494 | 70.691 | 4.763  | 2.380  | 1.00 | 37.67 |
| ATOM | 3782 | CA  | LEU | 494 | 71.236 | 3.450  | 2.656  | 1.00 | 38.41 |
| ATOM | 3783 | CB  | LEU | 494 | 70.482 | 2.387  | 1.851  | 1.00 | 39.16 |
| ATOM | 3784 | CG  | LEU | 494 | 70.834 | 0.908  | 2.021  | 1.00 | 36.43 |
| ATOM | 3785 | CD1 | LEU | 494 | 70.809 | 0.508  | 3.479  | 1.00 | 34.69 |
| ATOM | 3786 | CD2 | LEU | 494 | 69.840 | 0.086  | 1.229  | 1.00 | 37.48 |
| ATOM | 3787 | C   | LEU | 494 | 72.683 | 3.541  | 2.202  | 1.00 | 39.30 |
| ATOM | 3788 | O   | LEU | 494 | 72.976 | 4.201  | 1.207  | 1.00 | 39.21 |
| ATOM | 3789 | N   | ALA | 495 | 73.584 | 2.922  | 2.954  | 1.00 | 40.08 |
| ATOM | 3791 | CA  | ALA | 495 | 74.996 | 2.954  | 2.619  | 1.00 | 41.70 |
| ATOM | 3792 | CB  | ALA | 495 | 75.654 | 4.162  | 3.283  | 1.00 | 41.63 |
| ATOM | 3793 | C   | ALA | 495 | 75.670 | 1.669  | 3.080  | 1.00 | 43.92 |
| ATOM | 3794 | O   | ALA | 495 | 75.033 | 0.818  | 3.711  | 1.00 | 45.20 |
| ATOM | 3795 | N   | GLU | 496 | 76.946 | 1.515  | 2.731  | 1.00 | 44.21 |
| ATOM | 3797 | CA  | GLU | 496 | 77.712 | 0.347  | 3.137  | 1.00 | 43.44 |
| ATOM | 3798 | CB  | GLU | 496 | 78.046 | -0.538 | 1.943  | 1.00 | 45.87 |
| ATOM | 3799 | CG  | GLU | 496 | 76.816 | -1.142 | 1.301  | 1.00 | 53.11 |
| ATOM | 3800 | CD  | GLU | 496 | 77.145 | -2.262 | 0.339  | 1.00 | 56.68 |
| ATOM | 3801 | OE1 | GLU | 496 | 76.473 | -3.316 | 0.410  | 1.00 | 61.87 |
| ATOM | 3802 | OE2 | GLU | 496 | 78.068 | -2.091 | -0.482 | 1.00 | 58.18 |
| ATOM | 3803 | C   | GLU | 496 | 78.973 | 0.773  | 3.860  | 1.00 | 40.97 |
| ATOM | 3804 | O   | GLU | 496 | 79.835 | 1.437  | 3.302  | 1.00 | 40.91 |
| ATOM | 3805 | N   | ALA | 497 | 79.036 | 0.439  | 5.136  | 1.00 | 42.07 |
| ATOM | 3807 | CA  | ALA | 497 | 80.173 | 0.786  | 5.959  | 1.00 | 43.69 |
| ATOM | 3808 | CB  | ALA | 497 | 79.709 | 1.104  | 7.366  | 1.00 | 40.90 |
| ATOM | 3809 | C   | ALA | 497 | 81.160 | -0.372 | 5.962  | 1.00 | 46.16 |
| ATOM | 3810 | O   | ALA | 497 | 80.764 | -1.525 | 5.814  | 1.00 | 46.90 |
| ATOM | 3811 | N   | ILE | 498 | 82.446 | -0.059 | 6.090  | 1.00 | 48.78 |
| ATOM | 3813 | CA  | ILE | 498 | 83.494 | -1.068 | 6.114  | 1.00 | 49.59 |
| ATOM | 3814 | CB  | ILE | 498 | 84.395 | -0.993 | 4.858  | 1.00 | 49.46 |
| ATOM | 3815 | CG2 | ILE | 498 | 85.524 | -2.006 | 4.954  | 1.00 | 51.16 |
| ATOM | 3816 | CG1 | ILE | 498 | 83.577 | -1.244 | 3.591  | 1.00 | 48.96 |
| ATOM | 3817 | CD1 | ILE | 498 | 82.924 | 0.009  | 2.998  | 1.00 | 52.50 |
| ATOM | 3818 | C   | ILE | 498 | 84.352 | -0.877 | 7.355  | 1.00 | 51.33 |
| ATOM | 3819 | O   | ILE | 498 | 84.818 | 0.230  | 7.641  | 1.00 | 50.42 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3820 | N   | GLY | 499 | 84.506 | -1.952 | 8.119  | 1.00 | 53.87 |
| ATOM | 3822 | CA  | GLY | 499 | 85.314 | -1.909 | 9.324  | 1.00 | 58.16 |
| ATOM | 3823 | C   | GLY | 499 | 84.759 | -1.094 | 10.483 | 1.00 | 62.44 |
| ATOM | 3824 | O   | GLY | 499 | 85.510 | -0.400 | 11.175 | 1.00 | 65.17 |
| ATOM | 3825 | N   | LEU | 500 | 83.454 | -1.187 | 10.720 | 1.00 | 62.92 |
| ATOM | 3827 | CA  | LEU | 500 | 82.839 | -0.453 | 11.822 | 1.00 | 61.93 |
| ATOM | 3828 | CB  | LEU | 500 | 81.339 | -0.752 | 11.888 | 1.00 | 58.77 |
| ATOM | 3829 | CG  | LEU | 500 | 80.501 | -0.207 | 10.736 | 1.00 | 56.68 |
| ATOM | 3830 | CD1 | LEU | 500 | 79.047 | -0.547 | 10.964 | 1.00 | 55.05 |
| ATOM | 3831 | CD2 | LEU | 500 | 80.682 | 1.298  | 10.635 | 1.00 | 56.30 |
| ATOM | 3832 | C   | LEU | 500 | 83.501 | -0.820 | 13.149 | 1.00 | 63.28 |
| ATOM | 3833 | O   | LEU | 500 | 83.623 | -2.002 | 13.487 | 1.00 | 64.91 |
| ATOM | 3834 | N   | PRO | 505 | 87.387 | -6.451 | 10.091 | 1.00 | 82.92 |
| ATOM | 3835 | CD  | PRO | 505 | 88.522 | -6.966 | 10.874 | 1.00 | 83.74 |
| ATOM | 3836 | CA  | PRO | 505 | 87.618 | -5.052 | 9.705  | 1.00 | 80.73 |
| ATOM | 3837 | CB  | PRO | 505 | 89.027 | -4.770 | 10.247 | 1.00 | 81.95 |
| ATOM | 3838 | CG  | PRO | 505 | 89.655 | -6.133 | 10.342 | 1.00 | 83.54 |
| ATOM | 3839 | C   | PRO | 505 | 87.514 | -4.794 | 8.205  | 1.00 | 77.60 |
| ATOM | 3840 | O   | PRO | 505 | 87.445 | -3.651 | 7.761  | 1.00 | 77.24 |
| ATOM | 3841 | N   | ASN | 506 | 87.488 | -5.863 | 7.424  | 1.00 | 75.24 |
| ATOM | 3843 | CA  | ASN | 506 | 87.380 | -5.727 | 5.981  | 1.00 | 72.92 |
| ATOM | 3844 | CB  | ASN | 506 | 88.435 | -6.589 | 5.283  | 1.00 | 73.87 |
| ATOM | 3845 | C   | ASN | 506 | 85.978 | -6.122 | 5.529  | 1.00 | 70.43 |
| ATOM | 3846 | O   | ASN | 506 | 85.719 | -6.281 | 4.340  | 1.00 | 70.01 |
| ATOM | 3847 | N   | ARG | 507 | 85.075 | -6.273 | 6.491  | 1.00 | 68.31 |
| ATOM | 3849 | CA  | ARG | 507 | 83.697 | -6.647 | 6.200  | 1.00 | 65.59 |
| ATOM | 3850 | CB  | ARG | 507 | 83.112 | -7.429 | 7.378  | 1.00 | 66.34 |
| ATOM | 3851 | C   | ARG | 507 | 82.846 | -5.413 | 5.941  | 1.00 | 62.97 |
| ATOM | 3852 | O   | ARG | 507 | 83.191 | -4.313 | 6.375  | 1.00 | 63.16 |
| ATOM | 3853 | N   | VAL | 508 | 81.740 | -5.599 | 5.231  | 1.00 | 60.02 |
| ATOM | 3855 | CA  | VAL | 508 | 80.840 | -4.495 | 4.947  | 1.00 | 58.59 |
| ATOM | 3856 | CB  | VAL | 508 | 80.532 | -4.357 | 3.439  | 1.00 | 58.40 |
| ATOM | 3857 | CG1 | VAL | 508 | 81.813 | -4.196 | 2.658  | 1.00 | 61.14 |
| ATOM | 3858 | CG2 | VAL | 508 | 79.751 | -5.553 | 2.938  | 1.00 | 61.01 |
| ATOM | 3859 | C   | VAL | 508 | 79.537 | -4.682 | 5.707  | 1.00 | 57.24 |
| ATOM | 3860 | O   | VAL | 508 | 79.031 | -5.803 | 5.836  | 1.00 | 58.42 |
| ATOM | 3861 | N   | THR | 509 | 79.020 | -3.579 | 6.237  | 1.00 | 54.22 |
| ATOM | 3863 | CA  | THR | 509 | 77.769 | -3.572 | 6.973  | 1.00 | 48.99 |
| ATOM | 3864 | CB  | THR | 509 | 77.971 | -3.100 | 8.428  | 1.00 | 49.59 |
| ATOM | 3865 | OG1 | THR | 509 | 78.932 | -3.935 | 9.082  | 1.00 | 51.71 |
| ATOM | 3867 | CG2 | THR | 509 | 76.665 | -3.166 | 9.198  | 1.00 | 50.69 |
| ATOM | 3868 | C   | THR | 509 | 76.837 | -2.606 | 6.253  | 1.00 | 46.51 |
| ATOM | 3869 | O   | THR | 509 | 77.231 | -1.503 | 5.886  | 1.00 | 44.91 |
| ATOM | 3870 | N   | LYS | 510 | 75.628 | -3.059 | 5.966  | 1.00 | 45.65 |
| ATOM | 3872 | CA  | LYS | 510 | 74.658 | -2.208 | 5.314  | 1.00 | 43.61 |
| ATOM | 3873 | CB  | LYS | 510 | 73.598 | -3.058 | 4.632  | 1.00 | 45.46 |
| ATOM | 3874 | CG  | LYS | 510 | 72.845 | -2.306 | 3.568  | 1.00 | 54.00 |
| ATOM | 3875 | CD  | LYS | 510 | 73.022 | -2.912 | 2.183  | 1.00 | 58.74 |
| ATOM | 3876 | CE  | LYS | 510 | 72.194 | -4.184 | 2.007  | 1.00 | 59.63 |
| ATOM | 3877 | NZ  | LYS | 510 | 72.711 | -5.323 | 2.815  | 1.00 | 61.62 |
| ATOM | 3881 | C   | LYS | 510 | 74.065 | -1.359 | 6.450  | 1.00 | 42.05 |
| ATOM | 3882 | O   | LYS | 510 | 73.566 | -1.898 | 7.439  | 1.00 | 41.29 |
| ATOM | 3883 | N   | VAL | 511 | 74.185 | -0.038 | 6.333  | 1.00 | 40.14 |
| ATOM | 3885 | CA  | VAL | 511 | 73.719 | 0.894  | 7.359  | 1.00 | 35.38 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3886 | CB  | VAL | 511 | 74.932 | 1.554  | 8.074  | 1.00 | 33.16 |
| ATOM | 3887 | CG1 | VAL | 511 | 75.761 | 0.501  | 8.795  | 1.00 | 29.24 |
| ATOM | 3888 | CG2 | VAL | 511 | 75.804 | 2.295  | 7.054  | 1.00 | 30.37 |
| ATOM | 3889 | C   | VAL | 511 | 72.856 | 2.005  | 6.776  | 1.00 | 33.90 |
| ATOM | 3890 | O   | VAL | 511 | 72.722 | 2.110  | 5.558  | 1.00 | 32.53 |
| ATOM | 3891 | N   | ALA | 512 | 72.261 | 2.813  | 7.655  | 1.00 | 31.97 |
| ATOM | 3893 | CA  | ALA | 512 | 71.434 | 3.956  | 7.248  | 1.00 | 31.10 |
| ATOM | 3894 | CB  | ALA | 512 | 70.088 | 3.945  | 7.952  | 1.00 | 27.38 |
| ATOM | 3895 | C   | ALA | 512 | 72.225 | 5.186  | 7.660  | 1.00 | 30.49 |
| ATOM | 3896 | O   | ALA | 512 | 72.775 | 5.235  | 8.766  | 1.00 | 30.10 |
| ATOM | 3897 | N   | VAL | 513 | 72.312 | 6.162  | 6.765  | 1.00 | 30.50 |
| ATOM | 3899 | CA  | VAL | 513 | 73.064 | 7.382  | 7.041  | 1.00 | 29.68 |
| ATOM | 3900 | CB  | VAL | 513 | 74.204 | 7.593  | 6.015  | 1.00 | 28.89 |
| ATOM | 3901 | CG1 | VAL | 513 | 74.966 | 8.856  | 6.334  | 1.00 | 26.30 |
| ATOM | 3902 | CG2 | VAL | 513 | 75.134 | 6.389  | 5.987  | 1.00 | 26.66 |
| ATOM | 3903 | C   | VAL | 513 | 72.171 | 8.607  | 7.012  | 1.00 | 28.50 |
| ATOM | 3904 | O   | VAL | 513 | 71.536 | 8.893  | 5.994  | 1.00 | 26.27 |
| ATOM | 3905 | N   | LYS | 514 | 72.091 | 9.282  | 8.154  | 1.00 | 29.18 |
| ATOM | 3907 | CA  | LYS | 514 | 71.307 | 10.508 | 8.295  | 1.00 | 31.52 |
| ATOM | 3908 | CB  | LYS | 514 | 70.797 | 10.659 | 9.728  | 1.00 | 33.52 |
| ATOM | 3909 | CG  | LYS | 514 | 69.890 | 9.540  | 10.199 | 1.00 | 35.67 |
| ATOM | 3910 | CD  | LYS | 514 | 69.439 | 9.831  | 11.618 | 1.00 | 44.89 |
| ATOM | 3911 | CE  | LYS | 514 | 68.313 | 8.909  | 12.060 | 1.00 | 51.12 |
| ATOM | 3912 | NZ  | LYS | 514 | 67.029 | 9.137  | 11.307 | 1.00 | 57.11 |
| ATOM | 3916 | C   | LYS | 514 | 72.233 | 11.681 | 7.956  | 1.00 | 30.75 |
| ATOM | 3917 | O   | LYS | 514 | 73.390 | 11.698 | 8.379  | 1.00 | 30.08 |
| ATOM | 3918 | N   | MET | 515 | 71.724 | 12.651 | 7.201  | 1.00 | 29.45 |
| ATOM | 3920 | CA  | MET | 515 | 72.511 | 13.814 | 6.786  | 1.00 | 28.74 |
| ATOM | 3921 | CB  | MET | 515 | 73.342 | 13.466 | 5.552  | 1.00 | 27.72 |
| ATOM | 3922 | CG  | MET | 515 | 72.487 | 13.034 | 4.378  | 1.00 | 31.56 |
| ATOM | 3923 | SD  | MET | 515 | 73.442 | 12.549 | 2.945  | 1.00 | 34.98 |
| ATOM | 3924 | CE  | MET | 515 | 73.730 | 10.878 | 3.330  | 1.00 | 31.23 |
| ATOM | 3925 | C   | MET | 515 | 71.585 | 14.966 | 6.444  | 1.00 | 27.75 |
| ATOM | 3926 | O   | MET | 515 | 70.369 | 14.794 | 6.359  | 1.00 | 29.07 |
| ATOM | 3927 | N   | LEU | 516 | 72.152 | 16.145 | 6.247  | 1.00 | 28.33 |
| ATOM | 3929 | CA  | LEU | 516 | 71.348 | 17.313 | 5.912  | 1.00 | 31.16 |
| ATOM | 3930 | CB  | LEU | 516 | 72.052 | 18.605 | 6.339  | 1.00 | 28.70 |
| ATOM | 3931 | CG  | LEU | 516 | 72.312 | 18.866 | 7.826  | 1.00 | 28.33 |
| ATOM | 3932 | CD1 | LEU | 516 | 73.098 | 20.156 | 7.949  | 1.00 | 28.45 |
| ATOM | 3933 | CD2 | LEU | 516 | 71.020 | 18.959 | 8.604  | 1.00 | 21.64 |
| ATOM | 3934 | C   | LEU | 516 | 71.069 | 17.378 | 4.421  | 1.00 | 33.22 |
| ATOM | 3935 | O   | LEU | 516 | 71.762 | 16.760 | 3.619  | 1.00 | 35.00 |
| ATOM | 3936 | N   | LYS | 517 | 70.022 | 18.100 | 4.061  | 1.00 | 34.69 |
| ATOM | 3938 | CA  | LYS | 517 | 69.696 | 18.286 | 2.665  | 1.00 | 34.20 |
| ATOM | 3939 | CB  | LYS | 517 | 68.194 | 18.475 | 2.496  | 1.00 | 37.45 |
| ATOM | 3940 | CG  | LYS | 517 | 67.403 | 17.264 | 2.950  | 1.00 | 43.71 |
| ATOM | 3941 | CD  | LYS | 517 | 66.157 | 17.072 | 2.126  | 1.00 | 51.25 |
| ATOM | 3942 | CE  | LYS | 517 | 65.123 | 18.135 | 2.419  | 1.00 | 58.56 |
| ATOM | 3943 | NZ  | LYS | 517 | 64.010 | 18.049 | 1.438  | 1.00 | 63.12 |
| ATOM | 3947 | C   | LYS | 517 | 70.482 | 19.533 | 2.259  | 1.00 | 33.81 |
| ATOM | 3948 | O   | LYS | 517 | 70.991 | 20.244 | 3.130  | 1.00 | 33.17 |
| ATOM | 3949 | N   | SER | 518 | 70.603 | 19.788 | 0.959  | 1.00 | 33.42 |
| ATOM | 3951 | CA  | SER | 518 | 71.369 | 20.938 | 0.472  | 1.00 | 33.33 |
| ATOM | 3952 | CB  | SER | 518 | 71.550 | 20.842 | -1.042 | 1.00 | 33.23 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3953 | OG  | SER | 518 | 70.306 | 20.624 | -1.678 | 1.00 | 38.84 |
| ATOM | 3955 | C   | SER | 518 | 70.794 | 22.298 | 0.846  | 1.00 | 33.23 |
| ATOM | 3956 | O   | SER | 518 | 71.509 | 23.305 | 0.865  | 1.00 | 34.14 |
| ATOM | 3957 | N   | ASP | 519 | 69.510 | 22.313 | 1.178  | 1.00 | 32.77 |
| ATOM | 3959 | CA  | ASP | 519 | 68.825 | 23.541 | 1.570  | 1.00 | 33.26 |
| ATOM | 3960 | CB  | ASP | 519 | 67.401 | 23.563 | 0.995  | 1.00 | 35.10 |
| ATOM | 3961 | CG  | ASP | 519 | 66.484 | 22.503 | 1.617  | 1.00 | 38.98 |
| ATOM | 3962 | OD1 | ASP | 519 | 66.958 | 21.430 | 2.042  | 1.00 | 37.30 |
| ATOM | 3963 | OD2 | ASP | 519 | 65.261 | 22.754 | 1.674  | 1.00 | 43.65 |
| ATOM | 3964 | C   | ASP | 519 | 68.793 | 23.747 | 3.091  | 1.00 | 33.05 |
| ATOM | 3965 | O   | ASP | 519 | 68.114 | 24.648 | 3.580  | 1.00 | 35.19 |
| ATOM | 3966 | N   | ALA | 520 | 69.538 | 22.931 | 3.833  | 1.00 | 31.38 |
| ATOM | 3968 | CA  | ALA | 520 | 69.570 | 23.032 | 5.293  | 1.00 | 29.47 |
| ATOM | 3969 | CB  | ALA | 520 | 70.264 | 21.830 | 5.870  | 1.00 | 29.74 |
| ATOM | 3970 | C   | ALA | 520 | 70.229 | 24.301 | 5.812  | 1.00 | 29.83 |
| ATOM | 3971 | O   | ALA | 520 | 71.004 | 24.952 | 5.106  | 1.00 | 30.23 |
| ATOM | 3972 | N   | THR | 521 | 69.938 | 24.616 | 7.071  | 1.00 | 31.57 |
| ATOM | 3974 | CA  | THR | 521 | 70.487 | 25.793 | 7.742  | 1.00 | 34.56 |
| ATOM | 3975 | CB  | THR | 521 | 69.361 | 26.736 | 9.302  | 1.00 | 38.37 |
| ATOM | 3976 | OG1 | THR | 521 | 68.670 | 26.082 | 9.376  | 1.00 | 41.75 |
| ATOM | 3978 | CG2 | THR | 521 | 68.357 | 27.117 | 7.209  | 1.00 | 38.30 |
| ATOM | 3979 | C   | THR | 521 | 71.353 | 25.363 | 8.916  | 1.00 | 33.22 |
| ATOM | 3980 | O   | THR | 521 | 71.320 | 24.207 | 9.327  | 1.00 | 32.31 |
| ATOM | 3981 | N   | GLU | 522 | 72.092 | 26.310 | 9.479  | 1.00 | 34.43 |
| ATOM | 3983 | CA  | GLU | 522 | 72.951 | 26.042 | 10.619 | 1.00 | 39.53 |
| ATOM | 3984 | CB  | GLU | 522 | 73.634 | 27.340 | 11.068 | 1.00 | 46.35 |
| ATOM | 3985 | CG  | GLU | 522 | 74.398 | 27.271 | 12.402 | 1.00 | 58.03 |
| ATOM | 3986 | CD  | GLU | 522 | 75.772 | 26.603 | 12.301 | 1.00 | 63.14 |
| ATOM | 3987 | OE1 | GLU | 522 | 76.800 | 27.321 | 12.404 | 1.00 | 61.75 |
| ATOM | 3988 | OE2 | GLU | 522 | 75.824 | 25.359 | 12.158 | 1.00 | 66.35 |
| ATOM | 3989 | C   | GLU | 522 | 72.130 | 25.428 | 11.765 | 1.00 | 38.40 |
| ATOM | 3990 | C   | GLU | 522 | 72.642 | 24.622 | 12.543 | 1.00 | 37.92 |
| ATOM | 3991 | N   | LYS | 523 | 70.853 | 25.792 | 11.849 | 1.00 | 36.43 |
| ATOM | 3993 | CA  | LYS | 523 | 69.995 | 25.261 | 12.893 | 1.00 | 36.83 |
| ATOM | 3994 | CB  | LYS | 523 | 68.703 | 26.065 | 13.008 | 1.00 | 40.88 |
| ATOM | 3995 | CG  | LYS | 523 | 67.793 | 25.636 | 14.152 | 1.00 | 44.55 |
| ATOM | 3996 | CD  | LYS | 523 | 66.584 | 24.898 | 13.607 | 1.00 | 52.68 |
| ATOM | 3997 | CE  | LYS | 523 | 65.629 | 24.483 | 14.708 | 1.00 | 56.04 |
| ATOM | 3998 | NZ  | LYS | 523 | 64.537 | 23.646 | 14.123 | 1.00 | 58.13 |
| ATOM | 4002 | C   | LYS | 523 | 69.689 | 23.804 | 12.601 | 1.00 | 35.27 |
| ATOM | 4003 | O   | LYS | 523 | 69.645 | 22.985 | 13.513 | 1.00 | 36.58 |
| ATOM | 4004 | N   | ASP | 524 | 69.496 | 23.473 | 11.326 | 1.00 | 32.27 |
| ATOM | 4006 | CA  | ASP | 524 | 69.235 | 22.089 | 10.963 | 1.00 | 27.18 |
| ATOM | 4007 | CB  | ASP | 524 | 68.952 | 21.953 | 9.480  | 1.00 | 26.32 |
| ATOM | 4008 | CG  | ASP | 524 | 67.635 | 22.555 | 9.089  | 1.00 | 25.22 |
| ATOM | 4009 | OD1 | ASP | 524 | 66.662 | 22.394 | 9.848  | 1.00 | 31.78 |
| ATOM | 4010 | OD2 | ASP | 524 | 67.568 | 23.190 | 8.028  | 1.00 | 24.00 |
| ATOM | 4011 | C   | ASP | 524 | 70.445 | 21.268 | 11.342 | 1.00 | 26.83 |
| ATOM | 4012 | O   | ASP | 524 | 70.312 | 20.165 | 11.851 | 1.00 | 28.65 |
| ATOM | 4013 | N   | LEU | 525 | 71.633 | 21.827 | 11.129 | 1.00 | 28.69 |
| ATOM | 4015 | CA  | LEU | 525 | 72.872 | 21.148 | 11.473 | 1.00 | 26.96 |
| ATOM | 4016 | CB  | LEU | 525 | 74.077 | 21.981 | 11.049 | 1.00 | 22.80 |
| ATOM | 4017 | CG  | LEU | 525 | 75.445 | 21.355 | 11.341 | 1.00 | 22.32 |
| ATOM | 4018 | CD1 | LEU | 525 | 75.522 | 19.883 | 10.858 | 1.00 | 18.89 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4019 | CD2 | LEU | 525 | 76.504 | 22.212 | 10.704 | 1.00 | 17.44 |
| ATOM | 4020 | C   | LEU | 525 | 72.886 | 20.926 | 12.980 | 1.00 | 28.00 |
| ATOM | 4021 | O   | LEU | 525 | 73.160 | 19.816 | 13.462 | 1.00 | 28.82 |
| ATOM | 4022 | N   | SER | 526 | 72.567 | 21.992 | 13.707 | 1.00 | 27.98 |
| ATOM | 4024 | CA  | SER | 526 | 72.496 | 21.994 | 15.168 | 1.00 | 30.78 |
| ATOM | 4025 | CB  | SER | 526 | 71.939 | 23.345 | 15.627 | 1.00 | 33.18 |
| ATOM | 4026 | OG  | SER | 526 | 71.624 | 23.347 | 17.009 | 1.00 | 42.73 |
| ATOM | 4028 | C   | SER | 526 | 71.599 | 20.865 | 15.704 | 1.00 | 30.56 |
| ATOM | 4029 | O   | SER | 526 | 71.906 | 20.206 | 16.716 | 1.00 | 31.92 |
| ATOM | 4030 | N   | ASP | 527 | 70.484 | 20.665 | 15.018 | 1.00 | 28.19 |
| ATOM | 4032 | CA  | ASP | 527 | 69.516 | 19.651 | 15.366 | 1.00 | 27.41 |
| ATOM | 4033 | CB  | ASP | 527 | 68.207 | 19.932 | 14.632 | 1.00 | 27.63 |
| ATOM | 4034 | CG  | ASP | 527 | 67.492 | 21.172 | 15.149 | 1.00 | 27.37 |
| ATOM | 4035 | OD1 | ASP | 527 | 67.870 | 21.728 | 16.211 | 1.00 | 26.70 |
| ATOM | 4036 | OD2 | ASP | 527 | 66.525 | 21.579 | 14.487 | 1.00 | 33.80 |
| ATOM | 4037 | C   | ASP | 527 | 70.007 | 18.241 | 15.063 | 1.00 | 27.36 |
| ATOM | 4038 | O   | ASP | 527 | 69.722 | 17.309 | 15.816 | 1.00 | 30.13 |
| ATOM | 4039 | N   | LEU | 528 | 70.716 | 18.077 | 13.952 | 1.00 | 25.76 |
| ATOM | 4041 | CA  | LEU | 528 | 71.245 | 16.765 | 13.588 | 1.00 | 25.29 |
| ATOM | 4042 | CB  | LEU | 528 | 71.777 | 16.771 | 12.143 | 1.00 | 23.65 |
| ATOM | 4043 | CG  | LEU | 528 | 72.283 | 15.432 | 11.574 | 1.00 | 25.86 |
| ATOM | 4044 | CD1 | LEU | 528 | 71.234 | 14.341 | 11.770 | 1.00 | 23.35 |
| ATOM | 4045 | CD2 | LEU | 528 | 72.652 | 15.566 | 10.102 | 1.00 | 17.46 |
| ATOM | 4046 | C   | LEU | 528 | 72.351 | 16.368 | 14.578 | 1.00 | 25.66 |
| ATOM | 4047 | C   | LEU | 528 | 72.418 | 15.210 | 15.015 | 1.00 | 24.02 |
| ATOM | 4048 | N   | ILE | 529 | 73.200 | 17.338 | 14.934 | 1.00 | 26.36 |
| ATOM | 4050 | CA  | ILE | 529 | 74.304 | 17.130 | 15.886 | 1.00 | 26.17 |
| ATOM | 4051 | CB  | ILE | 529 | 75.192 | 18.381 | 16.003 | 1.00 | 22.72 |
| ATOM | 4052 | CG2 | ILE | 529 | 76.250 | 18.180 | 17.057 | 1.00 | 21.32 |
| ATOM | 4053 | CG1 | ILE | 529 | 75.876 | 18.666 | 14.685 | 1.00 | 20.71 |
| ATOM | 4054 | CD1 | ILE | 529 | 76.621 | 19.965 | 14.675 | 1.00 | 25.60 |
| ATOM | 4055 | C   | ILE | 529 | 73.756 | 16.835 | 17.283 | 1.00 | 29.87 |
| ATOM | 4056 | O   | ILE | 529 | 74.253 | 15.948 | 17.977 | 1.00 | 32.20 |
| ATOM | 4057 | N   | SER | 530 | 72.741 | 17.591 | 17.693 | 1.00 | 28.63 |
| ATOM | 4059 | CA  | SER | 530 | 72.143 | 17.381 | 18.991 | 1.00 | 32.21 |
| ATOM | 4060 | CB  | SER | 530 | 71.031 | 18.399 | 19.231 | 1.00 | 37.45 |
| ATOM | 4061 | OG  | SER | 530 | 70.065 | 19.342 | 18.195 | 1.00 | 49.52 |
| ATOM | 4063 | C   | SER | 530 | 71.598 | 15.956 | 19.075 | 1.00 | 30.96 |
| ATOM | 4064 | O   | SER | 530 | 71.728 | 15.301 | 20.105 | 1.00 | 33.05 |
| ATOM | 4065 | N   | GLU | 531 | 70.996 | 15.476 | 17.996 | 1.00 | 29.13 |
| ATOM | 4067 | CA  | GLU | 531 | 70.468 | 14.117 | 17.987 | 1.00 | 29.84 |
| ATOM | 4068 | CB  | GLU | 531 | 69.672 | 13.847 | 16.709 | 1.00 | 30.29 |
| ATOM | 4069 | CG  | GLU | 531 | 69.093 | 12.445 | 16.666 | 1.00 | 27.39 |
| ATOM | 4070 | CD  | GLU | 531 | 68.521 | 12.074 | 15.331 | 1.00 | 31.34 |
| ATOM | 4071 | OE1 | GLU | 531 | 67.929 | 10.981 | 15.228 | 1.00 | 35.90 |
| ATOM | 4072 | OE2 | GLU | 531 | 68.660 | 12.860 | 14.376 | 1.00 | 38.37 |
| ATOM | 4073 | C   | GLU | 531 | 71.600 | 13.081 | 18.109 | 1.00 | 28.48 |
| ATOM | 4074 | O   | GLU | 531 | 71.468 | 12.094 | 18.822 | 1.00 | 28.17 |
| ATOM | 4075 | N   | MET | 532 | 72.682 | 13.281 | 17.364 | 1.00 | 28.12 |
| ATOM | 4077 | CA  | MET | 532 | 73.832 | 12.376 | 17.409 | 1.00 | 27.64 |
| ATOM | 4078 | CB  | MET | 532 | 74.953 | 12.899 | 16.499 | 1.00 | 26.47 |
| ATOM | 4079 | CG  | MET | 532 | 76.267 | 12.125 | 16.601 | 1.00 | 22.25 |
| ATOM | 4080 | SD  | MET | 532 | 77.406 | 12.610 | 15.286 | 1.00 | 30.32 |
| ATOM | 4081 | CE  | MET | 532 | 77.613 | 14.366 | 15.661 | 1.00 | 20.92 |

|      |      |     |     |     |        |        |        |      |       |      |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|------|
| ATOM | 4082 | C   | MET | 532 | 74.339 | 12.328 | 18.832 | 1.00 | 27.87 |      |
| ATOM | 4083 | O   | MET | 532 | 74.640 | 11.267 | 19.364 | 1.00 | 30.31 |      |
| ATOM | 4084 | N   | GLU | 533 | 74.439 | 13.497 | 19.442 | 1.00 | 27.08 |      |
| ATOM | 4086 | CA  | GLU | 533 | 74.906 | 13.594 | 20.802 | 1.00 | 28.50 |      |
| ATOM | 4087 | CB  | GLU | 533 | 75.071 | 15.064 | 21.177 | 1.00 | 29.09 |      |
| ATOM | 4088 | CG  | GLU | 533 | 76.216 | 15.745 | 20.433 | 1.00 | 28.90 |      |
| ATOM | 4089 | CD  | GLU | 533 | 77.564 | 15.070 | 20.661 | 1.00 | 31.08 |      |
| ATOM | 4090 | OE1 | GLU | 533 | 78.001 | 14.969 | 21.823 | 1.00 | 34.15 |      |
| ATOM | 4091 | OE2 | GLU | 533 | 78.202 | 14.643 | 19.678 | 1.00 | 33.60 |      |
| ATOM | 4092 | C   | GLU | 533 | 73.981 | 12.850 | 21.774 | 1.00 | 29.91 |      |
| ATOM | 4093 | O   | GLU | 533 | 74.455 | 12.093 | 22.637 | 1.00 | 29.73 |      |
| ATOM | 4094 | N   | MET | 534 | 72.670 | 13.014 | 21.588 | 1.00 | 29.70 |      |
| ATOM | 4096 | CA  | MET | 534 | 71.692 | 12.346 | 22.444 | 1.00 | 27.97 |      |
| ATOM | 4097 | CB  | MET | 534 | 70.258 | 12.751 | 22.082 | 1.00 | 28.95 |      |
| ATOM | 4098 | CG  | MET | 534 | 69.311 | 12.594 | 23.278 | 0.50 | 29.62 | PRT1 |
| ATOM | 4099 | SD  | MET | 534 | 67.538 | 12.682 | 22.961 | 0.50 | 29.87 | PRT1 |
| ATOM | 4100 | CE  | MET | 534 | 67.269 | 14.452 | 22.795 | 0.50 | 31.07 | PRT1 |
| ATOM | 4101 | C   | MET | 534 | 71.855 | 10.821 | 22.362 | 1.00 | 28.36 |      |
| ATOM | 4102 | O   | MET | 534 | 71.833 | 10.143 | 23.386 | 1.00 | 27.02 |      |
| ATOM | 4103 | N   | MET | 535 | 72.048 | 10.297 | 21.151 | 1.00 | 26.96 |      |
| ATOM | 4105 | CA  | MET | 535 | 72.239 | 8.861  | 20.947 | 1.00 | 26.63 |      |
| ATOM | 4106 | CB  | MET | 535 | 72.347 | 8.521  | 19.456 | 1.00 | 24.67 |      |
| ATOM | 4107 | CG  | MET | 535 | 71.089 | 8.778  | 18.659 | 1.00 | 23.15 |      |
| ATOM | 4108 | SD  | MET | 535 | 71.160 | 8.062  | 17.011 | 1.00 | 24.57 |      |
| ATOM | 4109 | CE  | MET | 535 | 71.251 | 9.486  | 16.023 | 1.00 | 24.79 |      |
| ATOM | 4110 | C   | MET | 535 | 73.498 | 8.390  | 21.669 | 1.00 | 27.66 |      |
| ATOM | 4111 | O   | MET | 535 | 73.564 | 7.259  | 22.164 | 1.00 | 28.93 |      |
| ATOM | 4112 | N   | LYS | 536 | 74.515 | 9.246  | 21.698 | 1.00 | 29.13 |      |
| ATOM | 4114 | CA  | LYS | 536 | 75.757 | 8.918  | 22.392 | 1.00 | 30.50 |      |
| ATOM | 4115 | CB  | LYS | 536 | 76.812 | 9.985  | 22.131 | 1.00 | 29.15 |      |
| ATOM | 4116 | CG  | LYS | 536 | 77.499 | 9.883  | 20.802 | 1.00 | 27.71 |      |
| ATOM | 4117 | CD  | LYS | 536 | 78.377 | 11.100 | 20.615 | 1.00 | 28.12 |      |
| ATOM | 4118 | CE  | LYS | 536 | 79.085 | 11.096 | 19.279 | 1.00 | 26.89 |      |
| ATOM | 4119 | NZ  | LYS | 536 | 79.688 | 12.436 | 19.077 | 1.00 | 27.54 |      |
| ATOM | 4123 | C   | LYS | 536 | 75.480 | 8.836  | 23.892 | 1.00 | 31.92 |      |
| ATOM | 4124 | O   | LYS | 536 | 75.921 | 7.908  | 24.559 | 1.00 | 31.19 |      |
| ATOM | 4125 | N   | MET | 537 | 74.742 | 9.814  | 24.409 | 1.00 | 34.02 |      |
| ATOM | 4127 | CA  | MET | 537 | 74.384 | 9.881  | 25.822 | 1.00 | 36.35 |      |
| ATOM | 4128 | CB  | MET | 537 | 73.648 | 11.197 | 26.083 | 1.00 | 43.33 |      |
| ATOM | 4129 | CG  | MET | 537 | 73.096 | 11.376 | 27.507 | 1.00 | 54.60 |      |
| ATOM | 4130 | SD  | MET | 537 | 71.426 | 10.674 | 27.856 | 1.00 | 67.38 |      |
| ATOM | 4131 | CE  | MET | 537 | 71.684 | 9.813  | 29.440 | 1.00 | 62.03 |      |
| ATOM | 4132 | C   | MET | 537 | 73.507 | 8.705  | 26.253 | 1.00 | 34.53 |      |
| ATOM | 4133 | O   | MET | 537 | 73.744 | 8.069  | 27.275 | 1.00 | 36.76 |      |
| ATOM | 4134 | N   | ILE | 538 | 72.496 | 8.425  | 25.454 | 1.00 | 32.24 |      |
| ATOM | 4136 | CA  | ILE | 538 | 71.568 | 7.367  | 25.757 | 1.00 | 29.88 |      |
| ATOM | 4137 | CB  | ILE | 538 | 70.396 | 7.384  | 24.757 | 1.00 | 26.98 |      |
| ATOM | 4138 | CG2 | ILE | 538 | 69.582 | 6.096  | 24.842 | 1.00 | 27.93 |      |
| ATOM | 4139 | CG1 | ILE | 538 | 69.527 | 8.614  | 25.036 | 1.00 | 22.58 |      |
| ATOM | 4140 | CD1 | ILE | 538 | 68.399 | 8.787  | 24.058 | 1.00 | 24.58 |      |
| ATOM | 4141 | C   | ILE | 538 | 72.236 | 6.006  | 25.804 | 1.00 | 31.83 |      |
| ATOM | 4142 | O   | ILE | 538 | 71.983 | 5.227  | 26.713 | 1.00 | 36.32 |      |
| ATOM | 4143 | N   | GLY | 539 | 73.102 | 5.718  | 24.848 | 1.00 | 32.45 |      |
| ATOM | 4145 | CA  | GLY | 539 | 73.744 | 4.422  | 24.850 | 1.00 | 32.13 |      |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4146 | C   | GLY | 539 | 72.974 | 3.380   | 24.056 | 1.00 | 33.83 |
| ATOM | 4147 | O   | GLY | 539 | 71.876 | 3.654   | 23.530 | 1.00 | 33.75 |
| ATOM | 4148 | N   | LYS | 540 | 73.539 | 2.173   | 24.010 | 1.00 | 33.36 |
| ATOM | 4150 | CA  | LYS | 540 | 72.980 | 1.054   | 23.256 | 1.00 | 37.04 |
| ATOM | 4151 | CB  | LYS | 540 | 74.110 | 0.181   | 22.709 | 1.00 | 39.21 |
| ATOM | 4152 | CG  | LYS | 540 | 74.865 | 0.893   | 21.623 | 1.00 | 48.72 |
| ATOM | 4153 | CD  | LYS | 540 | 75.818 | 0.009   | 20.850 | 1.00 | 56.84 |
| ATOM | 4154 | CE  | LYS | 540 | 76.225 | 0.693   | 19.516 | 1.00 | 62.14 |
| ATOM | 4155 | NZ  | LYS | 540 | 77.252 | -0.102  | 18.805 | 1.00 | 71.02 |
| ATOM | 4159 | C   | LYS | 540 | 71.938 | 0.162   | 23.901 | 1.00 | 36.51 |
| ATOM | 4160 | O   | LYS | 540 | 71.963 | -0.096  | 25.113 | 1.00 | 38.52 |
| ATOM | 4161 | N   | HIS | 541 | 71.017 | -0.295  | 23.058 | 1.00 | 32.98 |
| ATOM | 4163 | CA  | HIS | 541 | 69.963 | -1.230  | 23.424 | 1.00 | 31.20 |
| ATOM | 4164 | CB  | HIS | 541 | 68.779 | -0.561  | 24.095 | 1.00 | 30.35 |
| ATOM | 4165 | CG  | HIS | 541 | 67.815 | -1.540  | 24.694 | 1.00 | 32.56 |
| ATOM | 4166 | CD2 | HIS | 541 | 67.737 | -2.058  | 25.941 | 1.00 | 32.45 |
| ATOM | 4167 | ND1 | HIS | 541 | 66.795 | -2.124  | 23.974 | 1.00 | 29.22 |
| ATOM | 4169 | CE1 | HIS | 541 | 66.134 | -2.965  | 24.753 | 1.00 | 31.56 |
| ATOM | 4170 | NE2 | HIS | 541 | 66.679 | -2.932  | 25.957 | 1.00 | 32.22 |
| ATOM | 4172 | C   | HIS | 541 | 69.509 | -1.937  | 22.152 | 1.00 | 32.00 |
| ATOM | 4173 | O   | HIS | 541 | 69.409 | -1.324  | 21.095 | 1.00 | 32.84 |
| ATOM | 4174 | N   | LYS | 542 | 69.187 | -3.222  | 22.273 | 1.00 | 33.61 |
| ATOM | 4176 | CA  | LYS | 542 | 68.786 | -4.061  | 21.154 | 1.00 | 31.54 |
| ATOM | 4177 | CB  | LYS | 542 | 68.653 | -5.516  | 21.596 | 1.00 | 33.94 |
| ATOM | 4178 | CG  | LYS | 542 | 68.322 | -6.451  | 20.437 | 1.00 | 42.34 |
| ATOM | 4179 | CD  | LYS | 542 | 68.083 | -7.885  | 20.856 | 1.00 | 47.57 |
| ATOM | 4180 | CE  | LYS | 542 | 67.634 | -8.726  | 19.658 | 1.00 | 52.70 |
| ATOM | 4181 | NZ  | LYS | 542 | 67.402 | -10.146 | 20.023 | 1.00 | 59.51 |
| ATOM | 4185 | C   | LYS | 542 | 67.495 | -3.611  | 20.487 | 1.00 | 29.57 |
| ATOM | 4186 | O   | LYS | 542 | 67.268 | -3.884  | 19.305 | 1.00 | 27.99 |
| ATOM | 4187 | N   | ASN | 543 | 66.649 | -2.931  | 21.253 | 1.00 | 28.32 |
| ATOM | 4189 | CA  | ASN | 543 | 65.378 | -2.476  | 20.714 | 1.00 | 28.86 |
| ATOM | 4190 | CB  | ASN | 543 | 64.231 | -2.947  | 21.601 | 1.00 | 29.33 |
| ATOM | 4191 | CG  | ASN | 543 | 64.247 | -4.452  | 21.811 | 1.00 | 29.64 |
| ATOM | 4192 | OD1 | ASN | 543 | 64.437 | -4.926  | 22.930 | 1.00 | 33.86 |
| ATOM | 4193 | ND2 | ASN | 543 | 64.106 | -5.206  | 20.732 | 1.00 | 28.02 |
| ATOM | 4196 | C   | ASN | 543 | 65.252 | -0.983  | 20.378 | 1.00 | 29.69 |
| ATOM | 4197 | O   | ASN | 543 | 64.159 | -0.413  | 20.457 | 1.00 | 30.02 |
| ATOM | 4198 | N   | ILE | 544 | 66.372 | -0.357  | 20.011 | 1.00 | 27.35 |
| ATOM | 4200 | CA  | ILE | 544 | 66.382 | 1.046   | 19.593 | 1.00 | 25.95 |
| ATOM | 4201 | CB  | ILE | 544 | 66.898 | 2.030   | 20.706 | 1.00 | 25.56 |
| ATOM | 4202 | CG2 | ILE | 544 | 66.148 | 1.819   | 22.037 | 1.00 | 21.06 |
| ATOM | 4203 | CG1 | ILE | 544 | 68.406 | 1.901   | 20.902 | 1.00 | 25.61 |
| ATOM | 4204 | CD1 | ILE | 544 | 68.952 | 2.818   | 21.976 | 1.00 | 25.89 |
| ATOM | 4205 | C   | ILE | 544 | 67.341 | 1.083   | 18.399 | 1.00 | 25.97 |
| ATOM | 4206 | O   | ILE | 544 | 68.126 | 0.152   | 18.227 | 1.00 | 25.69 |
| ATOM | 4207 | N   | ILE | 545 | 67.226 | 2.095   | 17.537 | 1.00 | 27.27 |
| ATOM | 4209 | CA  | ILE | 545 | 68.129 | 2.243   | 16.384 | 1.00 | 27.02 |
| ATOM | 4210 | CB  | ILE | 545 | 67.541 | 3.194   | 15.307 | 1.00 | 27.30 |
| ATOM | 4211 | CG2 | ILE | 545 | 68.592 | 3.553   | 14.269 | 1.00 | 26.52 |
| ATOM | 4212 | CG1 | ILE | 545 | 66.309 | 2.570   | 14.638 | 1.00 | 22.63 |
| ATOM | 4213 | CD1 | ILE | 545 | 66.605 | 1.447   | 13.665 | 1.00 | 17.57 |
| ATOM | 4214 | C   | ILE | 545 | 69.383 | 2.873   | 16.979 | 1.00 | 28.55 |
| ATOM | 4215 | O   | ILE | 545 | 69.346 | 4.014   | 17.451 | 1.00 | 29.47 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4216 | N   | ASN | 546 | 70.482 | 2.123  | 16.965 | 1.00 | 30.90 |
| ATOM | 4218 | CA  | ASN | 546 | 71.748 | 2.564  | 17.560 | 1.00 | 29.56 |
| ATOM | 4219 | CB  | ASN | 546 | 72.497 | 1.365  | 18.159 | 1.00 | 26.32 |
| ATOM | 4220 | CG  | ASN | 546 | 71.732 | 0.695  | 19.281 | 1.00 | 23.81 |
| ATOM | 4221 | OD1 | ASN | 546 | 71.580 | 1.252  | 20.362 | 1.00 | 27.34 |
| ATOM | 4222 | ND2 | ASN | 546 | 71.267 | -0.515 | 19.039 | 1.00 | 23.49 |
| ATOM | 4225 | C   | ASN | 546 | 72.700 | 3.330  | 16.653 | 1.00 | 30.99 |
| ATOM | 4226 | O   | ASN | 546 | 72.679 | 3.169  | 15.430 | 1.00 | 30.98 |
| ATOM | 4227 | N   | LEU | 547 | 73.543 | 4.148  | 17.286 | 1.00 | 32.29 |
| ATOM | 4229 | CA  | LEU | 547 | 74.570 | 4.948  | 16.610 | 1.00 | 30.93 |
| ATOM | 4230 | CB  | LEU | 547 | 75.043 | 6.076  | 17.542 | 1.00 | 25.97 |
| ATOM | 4231 | CG  | LEU | 547 | 76.075 | 7.088  | 17.021 | 1.00 | 22.12 |
| ATOM | 4232 | CD1 | LEU | 547 | 75.553 | 7.815  | 15.765 | 1.00 | 22.10 |
| ATOM | 4233 | CD2 | LEU | 547 | 76.415 | 8.089  | 18.112 | 1.00 | 18.67 |
| ATOM | 4234 | C   | LEU | 547 | 75.756 | 4.039  | 16.264 | 1.00 | 30.70 |
| ATOM | 4235 | O   | LEU | 547 | 76.284 | 3.361  | 17.137 | 1.00 | 34.46 |
| ATOM | 4236 | N   | LEU | 548 | 76.141 | 3.993  | 14.992 | 1.00 | 30.97 |
| ATOM | 4238 | CA  | LEU | 548 | 77.262 | 3.165  | 14.562 | 1.00 | 30.73 |
| ATOM | 4239 | CB  | LEU | 548 | 76.929 | 2.406  | 13.281 | 1.00 | 29.24 |
| ATOM | 4240 | CG  | LEU | 548 | 75.788 | 1.394  | 13.371 | 1.00 | 28.77 |
| ATOM | 4241 | CD1 | LEU | 548 | 75.924 | 0.460  | 12.209 | 1.00 | 26.55 |
| ATOM | 4242 | CD2 | LEU | 548 | 75.839 | 0.616  | 14.683 | 1.00 | 23.48 |
| ATOM | 4243 | C   | LEU | 548 | 78.522 | 3.982  | 14.347 | 1.00 | 33.00 |
| ATOM | 4244 | O   | LEU | 548 | 79.640 | 3.500  | 14.558 | 1.00 | 35.92 |
| ATOM | 4245 | N   | GLY | 549 | 78.351 | 5.215  | 13.901 | 1.00 | 32.52 |
| ATOM | 4247 | CA  | GLY | 549 | 79.503 | 6.051  | 13.673 | 1.00 | 32.76 |
| ATOM | 4248 | C   | GLY | 549 | 79.092 | 7.411  | 13.180 | 1.00 | 33.72 |
| ATOM | 4249 | O   | GLY | 549 | 77.895 | 7.707  | 13.092 | 1.00 | 35.01 |
| ATOM | 4250 | N   | ALA | 550 | 80.089 | 8.226  | 12.840 | 1.00 | 33.47 |
| ATOM | 4252 | CA  | ALA | 550 | 79.848 | 9.566  | 12.337 | 1.00 | 30.69 |
| ATOM | 4253 | CB  | ALA | 550 | 79.555 | 10.509 | 13.497 | 1.00 | 28.66 |
| ATOM | 4254 | C   | ALA | 550 | 81.022 | 10.099 | 11.523 | 1.00 | 30.41 |
| ATOM | 4255 | O   | ALA | 550 | 82.181 | 9.780  | 11.808 | 1.00 | 29.13 |
| ATOM | 4256 | N   | CYS | 551 | 80.695 | 10.817 | 10.446 | 1.00 | 30.29 |
| ATOM | 4258 | CA  | CYS | 551 | 81.675 | 11.490 | 9.584  | 1.00 | 28.44 |
| ATOM | 4259 | CB  | CYS | 551 | 81.432 | 11.214 | 8.096  | 1.00 | 27.25 |
| ATOM | 4260 | SG  | CYS | 551 | 81.639 | 9.508  | 7.566  | 1.00 | 28.89 |
| ATOM | 4261 | C   | CYS | 551 | 81.337 | 12.950 | 9.883  | 1.00 | 27.07 |
| ATOM | 4262 | O   | CYS | 551 | 80.293 | 13.441 | 9.467  | 1.00 | 29.86 |
| ATOM | 4263 | N   | THR | 552 | 82.184 | 13.616 | 10.658 | 1.00 | 25.10 |
| ATOM | 4265 | CA  | THR | 552 | 81.952 | 14.997 | 11.047 | 1.00 | 24.37 |
| ATOM | 4266 | CB  | THR | 552 | 81.959 | 15.091 | 12.569 | 1.00 | 27.67 |
| ATOM | 4267 | OG1 | THR | 552 | 83.271 | 14.760 | 13.052 | 1.00 | 26.11 |
| ATOM | 4269 | CG2 | THR | 552 | 80.951 | 14.120 | 13.164 | 1.00 | 30.41 |
| ATOM | 4270 | C   | THR | 552 | 83.003 | 15.980 | 10.557 | 1.00 | 24.51 |
| ATOM | 4271 | O   | THR | 552 | 82.804 | 17.194 | 10.604 | 1.00 | 21.56 |
| ATOM | 4272 | N   | GLN | 553 | 84.151 | 15.441 | 10.162 | 1.00 | 27.13 |
| ATOM | 4274 | CA  | GLN | 553 | 85.284 | 16.243 | 9.710  | 1.00 | 26.64 |
| ATOM | 4275 | CB  | GLN | 553 | 86.592 | 15.679 | 10.283 | 1.00 | 25.24 |
| ATOM | 4276 | CG  | GLN | 553 | 86.641 | 15.561 | 11.809 | 1.00 | 22.38 |
| ATOM | 4277 | CD  | GLN | 553 | 86.464 | 16.897 | 12.515 | 1.00 | 24.04 |
| ATOM | 4278 | OE1 | GLN | 553 | 87.267 | 17.815 | 12.344 | 1.00 | 31.50 |
| ATOM | 4279 | NE2 | GLN | 553 | 85.403 | 17.017 | 13.304 | 1.00 | 21.59 |
| ATOM | 4282 | C   | GLN | 553 | 85.384 | 16.276 | 8.206  | 1.00 | 28.02 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4283 | O   | GLN | 553 | 85.069 | 15.293 | 7.537  | 1.00 | 30.20 |
| ATOM | 4284 | N   | ASP | 554 | 85.794 | 17.430 | 7.695  | 1.00 | 28.08 |
| ATOM | 4286 | CA  | ASP | 554 | 86.000 | 17.652 | 6.263  | 1.00 | 30.14 |
| ATOM | 4287 | CB  | ASP | 554 | 87.330 | 17.034 | 5.833  | 1.00 | 29.82 |
| ATOM | 4288 | CG  | ASP | 554 | 88.451 | 17.470 | 6.707  | 1.00 | 31.79 |
| ATOM | 4289 | OD1 | ASP | 554 | 88.699 | 18.666 | 6.767  | 1.00 | 36.45 |
| ATOM | 4290 | OD2 | ASP | 554 | 89.066 | 16.623 | 7.364  | 1.00 | 33.06 |
| ATOM | 4291 | C   | ASP | 554 | 84.895 | 17.217 | 5.317  | 1.00 | 29.52 |
| ATOM | 4292 | O   | ASP | 554 | 85.128 | 16.411 | 4.424  | 1.00 | 33.67 |
| ATOM | 4293 | N   | GLY | 555 | 83.709 | 17.793 | 5.488  | 1.00 | 29.02 |
| ATOM | 4295 | CA  | GLY | 555 | 82.586 | 17.476 | 4.621  | 1.00 | 26.05 |
| ATOM | 4296 | C   | GLY | 555 | 81.286 | 17.447 | 5.405  | 1.00 | 23.80 |
| ATOM | 4297 | O   | GLY | 555 | 81.269 | 17.751 | 6.597  | 1.00 | 24.09 |
| ATOM | 4298 | N   | PRO | 556 | 80.175 | 17.117 | 4.740  | 1.00 | 23.29 |
| ATOM | 4299 | CD  | PRO | 556 | 80.094 | 16.804 | 3.304  | 1.00 | 18.93 |
| ATOM | 4300 | CA  | PRO | 556 | 78.860 | 17.045 | 5.378  | 1.00 | 23.45 |
| ATOM | 4301 | CB  | PRO | 556 | 77.943 | 16.643 | 4.226  | 1.00 | 22.35 |
| ATOM | 4302 | CG  | PRO | 556 | 78.889 | 15.931 | 3.261  | 1.00 | 24.94 |
| ATOM | 4303 | C   | PRO | 556 | 78.806 | 16.019 | 6.503  | 1.00 | 26.66 |
| ATOM | 4304 | O   | PRO | 556 | 79.488 | 14.984 | 6.464  | 1.00 | 27.76 |
| ATOM | 4305 | N   | LEU | 557 | 78.006 | 16.324 | 7.522  | 1.00 | 29.14 |
| ATOM | 4307 | CA  | LEU | 557 | 77.842 | 15.440 | 8.676  | 1.00 | 30.83 |
| ATOM | 4308 | CB  | LEU | 557 | 77.173 | 16.181 | 9.842  | 1.00 | 28.40 |
| ATOM | 4309 | CG  | LEU | 557 | 76.775 | 15.393 | 11.097 | 1.00 | 22.93 |
| ATOM | 4310 | CD1 | LEU | 557 | 77.989 | 14.897 | 11.835 | 1.00 | 23.02 |
| ATOM | 4311 | CD2 | LEU | 557 | 75.970 | 16.285 | 12.984 | 1.00 | 23.53 |
| ATOM | 4312 | C   | LEU | 557 | 77.028 | 14.200 | 8.321  | 1.00 | 31.04 |
| ATOM | 4313 | O   | LEU | 557 | 75.968 | 14.293 | 7.634  | 1.00 | 31.89 |
| ATOM | 4314 | N   | TYR | 558 | 77.552 | 13.041 | 8.700  | 1.00 | 29.88 |
| ATOM | 4316 | CA  | TYR | 558 | 76.891 | 11.773 | 8.460  | 1.00 | 27.80 |
| ATOM | 4317 | CB  | TYR | 558 | 77.741 | 10.978 | 7.562  | 1.00 | 28.04 |
| ATOM | 4318 | CG  | TYR | 558 | 77.895 | 11.339 | 6.122  | 1.00 | 29.98 |
| ATOM | 4319 | CD1 | TYR | 558 | 78.843 | 10.751 | 5.289  | 1.00 | 31.81 |
| ATOM | 4320 | CE1 | TYR | 558 | 78.980 | 11.140 | 3.956  | 1.00 | 32.22 |
| ATOM | 4321 | CD2 | TYR | 558 | 77.086 | 12.335 | 5.584  | 1.00 | 31.50 |
| ATOM | 4322 | CE2 | TYR | 558 | 77.214 | 12.729 | 4.256  | 1.00 | 31.57 |
| ATOM | 4323 | CZ  | TYR | 558 | 78.166 | 12.125 | 3.449  | 1.00 | 32.04 |
| ATOM | 4324 | OH  | TYR | 558 | 78.317 | 12.511 | 2.134  | 1.00 | 33.34 |
| ATOM | 4326 | C   | TYR | 558 | 76.715 | 11.099 | 9.809  | 1.00 | 27.34 |
| ATOM | 4327 | O   | TYR | 558 | 77.678 | 10.937 | 10.558 | 1.00 | 25.80 |
| ATOM | 4328 | N   | VAL | 559 | 75.464 | 10.798 | 10.147 | 1.00 | 28.06 |
| ATOM | 4330 | CA  | VAL | 559 | 75.118 | 10.118 | 11.394 | 1.00 | 26.67 |
| ATOM | 4331 | CB  | VAL | 559 | 73.930 | 10.816 | 12.129 | 1.00 | 26.22 |
| ATOM | 4332 | CG1 | VAL | 559 | 73.590 | 10.079 | 13.425 | 1.00 | 22.58 |
| ATOM | 4333 | CG2 | VAL | 559 | 74.298 | 12.278 | 12.440 | 1.00 | 23.09 |
| ATOM | 4334 | C   | VAL | 559 | 74.745 | 8.715  | 10.943 | 1.00 | 24.32 |
| ATOM | 4335 | O   | VAL | 559 | 73.665 | 8.464  | 10.412 | 1.00 | 26.37 |
| ATOM | 4336 | N   | ILE | 560 | 75.689 | 7.815  | 11.095 | 1.00 | 23.63 |
| ATOM | 4338 | CA  | ILE | 560 | 75.514 | 6.448  | 10.664 | 1.00 | 24.67 |
| ATOM | 4339 | CB  | ILE | 560 | 76.901 | 5.859  | 10.299 | 1.00 | 24.62 |
| ATOM | 4340 | CG2 | ILE | 560 | 76.753 | 4.507  | 9.646  | 1.00 | 30.13 |
| ATOM | 4341 | CG1 | ILE | 560 | 77.627 | 6.810  | 9.326  | 1.00 | 21.87 |
| ATOM | 4342 | CD1 | ILE | 560 | 79.114 | 6.538  | 9.162  | 1.00 | 22.25 |
| ATOM | 4343 | C   | ILE | 560 | 74.814 | 5.621  | 11.737 | 1.00 | 27.30 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4344 | O   | ILE | 560 | 75.306 | 5.505   | 12.865 | 1.00 | 28.80 |
| ATOM | 4345 | N   | VAL | 561 | 73.641 | 5.090   | 11.406 | 1.00 | 26.80 |
| ATOM | 4347 | CA  | VAL | 561 | 72.894 | 4.272   | 12.352 | 1.00 | 26.16 |
| ATOM | 4348 | CB  | VAL | 561 | 71.572 | 4.953   | 12.810 | 1.00 | 24.10 |
| ATOM | 4349 | CG1 | VAL | 561 | 71.866 | 6.208   | 13.599 | 1.00 | 24.11 |
| ATOM | 4350 | CG2 | VAL | 561 | 70.676 | 5.254   | 11.625 | 1.00 | 21.97 |
| ATOM | 4351 | C   | VAL | 561 | 72.572 | 2.901   | 11.761 | 1.00 | 27.98 |
| ATOM | 4352 | O   | VAL | 561 | 72.853 | 2.632   | 10.584 | 1.00 | 26.49 |
| ATOM | 4353 | N   | GLU | 562 | 71.998 | 2.039   | 12.599 | 1.00 | 28.86 |
| ATOM | 4355 | CA  | GLU | 562 | 71.605 | 0.685   | 12.219 | 1.00 | 28.23 |
| ATOM | 4356 | CB  | GLU | 562 | 71.090 | -0.068  | 13.440 | 1.00 | 25.86 |
| ATOM | 4357 | CG  | GLU | 562 | 72.170 | -0.392  | 14.424 | 1.00 | 27.04 |
| ATOM | 4358 | CD  | GLU | 562 | 71.641 | -0.969  | 15.714 | 1.00 | 28.37 |
| ATOM | 4359 | OE1 | GLU | 562 | 72.389 | -1.714  | 16.372 | 1.00 | 33.36 |
| ATOM | 4360 | OE2 | GLU | 562 | 70.491 | -0.665  | 16.092 | 1.00 | 31.60 |
| ATOM | 4361 | C   | GLU | 562 | 70.529 | 0.720   | 11.171 | 1.00 | 29.67 |
| ATOM | 4362 | O   | GLU | 562 | 69.581 | 1.489   | 11.287 | 1.00 | 32.53 |
| ATOM | 4363 | N   | TYR | 563 | 70.666 | -0.126  | 10.162 | 1.00 | 30.70 |
| ATOM | 4365 | CA  | TYR | 563 | 69.699 | -0.209  | 9.083  | 1.00 | 30.65 |
| ATOM | 4366 | CB  | TYR | 563 | 70.419 | -0.621  | 7.801  | 1.00 | 30.83 |
| ATOM | 4367 | CG  | TYR | 563 | 69.510 | -0.905  | 6.633  | 1.00 | 32.10 |
| ATOM | 4368 | CD1 | TYR | 563 | 68.545 | 0.018   | 6.235  | 1.00 | 33.24 |
| ATOM | 4369 | CE1 | TYR | 563 | 67.715 | -0.227  | 5.160  | 1.00 | 34.65 |
| ATOM | 4370 | CD2 | TYR | 563 | 69.609 | -2.098  | 5.922  | 1.00 | 31.04 |
| ATOM | 4371 | CE2 | TYR | 563 | 68.779 | -2.353  | 4.838  | 1.00 | 33.12 |
| ATOM | 4372 | CZ  | TYR | 563 | 67.831 | -1.413  | 4.470  | 1.00 | 34.22 |
| ATOM | 4373 | CH  | TYR | 563 | 67.002 | -1.650  | 3.400  | 1.00 | 34.76 |
| ATOM | 4375 | C   | TYR | 563 | 68.592 | -1.223  | 9.406  | 1.00 | 34.39 |
| ATOM | 4376 | O   | TYR | 563 | 68.855 | -2.325  | 9.884  | 1.00 | 34.87 |
| ATOM | 4377 | N   | ALA | 564 | 67.356 | -0.861  | 9.091  | 1.00 | 35.49 |
| ATOM | 4379 | CA  | ALA | 564 | 66.212 | -1.726  | 9.324  | 1.00 | 35.41 |
| ATOM | 4380 | CB  | ALA | 564 | 65.213 | -1.000  | 10.210 | 1.00 | 35.93 |
| ATOM | 4381 | C   | ALA | 564 | 65.585 | -2.056  | 7.962  | 1.00 | 37.19 |
| ATOM | 4382 | O   | ALA | 564 | 64.789 | -1.276  | 7.434  | 1.00 | 38.08 |
| ATOM | 4383 | N   | SER | 565 | 65.931 | -3.211  | 7.401  | 1.00 | 37.14 |
| ATOM | 4385 | CA  | SER | 565 | 65.433 | -3.616  | 6.080  | 1.00 | 36.83 |
| ATOM | 4386 | CB  | SER | 565 | 66.151 | -4.881  | 5.614  | 1.00 | 35.24 |
| ATOM | 4387 | OG  | SER | 565 | 66.105 | -5.873  | 6.619  | 1.00 | 34.96 |
| ATOM | 4389 | C   | SER | 565 | 63.932 | -3.782  | 5.886  | 1.00 | 38.65 |
| ATOM | 4390 | O   | SER | 565 | 63.428 | -3.617  | 4.760  | 1.00 | 37.80 |
| ATOM | 4391 | N   | LYS | 566 | 63.212 | -4.077  | 6.964  | 1.00 | 38.96 |
| ATOM | 4393 | CA  | LYS | 566 | 61.772 | -4.271  | 6.851  | 1.00 | 37.83 |
| ATOM | 4394 | CB  | LYS | 566 | 61.357 | -5.495  | 7.655  | 1.00 | 39.07 |
| ATOM | 4395 | CG  | LYS | 566 | 61.954 | -6.765  | 7.078  | 1.00 | 43.73 |
| ATOM | 4396 | CD  | LYS | 566 | 61.813 | -7.950  | 7.996  | 1.00 | 47.07 |
| ATOM | 4397 | CE  | LYS | 566 | 62.258 | -9.216  | 7.299  | 1.00 | 47.77 |
| ATOM | 4398 | NZ  | LYS | 566 | 62.361 | -10.326 | 8.278  | 1.00 | 51.48 |
| ATOM | 4402 | C   | LYS | 566 | 60.899 | -3.050  | 7.165  | 1.00 | 37.53 |
| ATOM | 4403 | O   | LYS | 566 | 59.702 | -3.180  | 7.442  | 1.00 | 38.55 |
| ATOM | 4404 | N   | GLY | 567 | 61.496 | -1.866  | 7.066  | 1.00 | 35.23 |
| ATOM | 4406 | CA  | GLY | 567 | 60.788 | -0.627  | 7.305  | 1.00 | 33.64 |
| ATOM | 4407 | C   | GLY | 567 | 60.120 | -0.485  | 8.656  | 1.00 | 33.24 |
| ATOM | 4408 | O   | GLY | 567 | 60.518 | -1.133  | 9.627  | 1.00 | 33.80 |
| ATOM | 4409 | N   | ASN | 568 | 59.120 | 0.389   | 8.716  | 1.00 | 31.65 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4411 | CA  | ASN | 568 | 58.407 | 0.623  | 9.952  | 1.00 | 33.38 |
| ATOM | 4412 | CB  | ASN | 568 | 57.831 | 2.055  | 10.025 | 1.00 | 37.10 |
| ATOM | 4413 | CG  | ASN | 568 | 56.624 | 2.272  | 9.116  | 1.00 | 37.78 |
| ATOM | 4414 | OD1 | ASN | 568 | 55.552 | 1.708  | 9.337  | 1.00 | 41.15 |
| ATOM | 4415 | ND2 | ASN | 568 | 56.780 | 3.147  | 8.124  | 1.00 | 35.74 |
| ATOM | 4418 | C   | ASN | 568 | 57.357 | -0.435 | 10.263 | 1.00 | 33.33 |
| ATOM | 4419 | O   | ASN | 568 | 56.917 | -1.178 | 9.384  | 1.00 | 32.54 |
| ATOM | 4420 | N   | LEU | 569 | 56.971 | -0.490 | 11.532 | 1.00 | 33.35 |
| ATOM | 4422 | CA  | LEU | 569 | 56.004 | -1.455 | 12.040 | 1.00 | 32.38 |
| ATOM | 4423 | CB  | LEU | 569 | 55.838 | -1.263 | 13.552 | 1.00 | 27.50 |
| ATOM | 4424 | CG  | LEU | 569 | 54.954 | -2.259 | 14.291 | 1.00 | 26.34 |
| ATOM | 4425 | CD1 | LEU | 569 | 55.452 | -3.671 | 14.007 | 1.00 | 24.19 |
| ATOM | 4426 | CD2 | LEU | 569 | 54.968 | -1.951 | 15.787 | 1.00 | 21.44 |
| ATOM | 4427 | C   | LEU | 569 | 54.641 | -1.433 | 11.355 | 1.00 | 33.35 |
| ATOM | 4428 | O   | LEU | 569 | 54.060 | -2.484 | 11.095 | 1.00 | 34.99 |
| ATOM | 4429 | N   | ARG | 570 | 54.130 | -0.239 | 11.083 | 1.00 | 34.36 |
| ATOM | 4431 | CA  | ARG | 570 | 52.827 | -0.091 | 10.445 | 1.00 | 36.82 |
| ATOM | 4432 | CB  | ARG | 570 | 52.548 | 1.393  | 10.188 | 1.00 | 37.28 |
| ATOM | 4433 | CG  | ARG | 570 | 51.210 | 1.689  | 9.539  | 1.00 | 43.90 |
| ATOM | 4434 | CD  | ARG | 570 | 51.212 | 3.099  | 8.967  | 1.00 | 50.39 |
| ATOM | 4435 | NE  | ARG | 570 | 52.273 | 3.268  | 7.973  | 1.00 | 54.99 |
| ATOM | 4437 | CZ  | ARG | 570 | 53.075 | 4.328  | 7.887  | 1.00 | 54.96 |
| ATOM | 4438 | NH1 | ARG | 570 | 52.947 | 5.343  | 8.735  | 1.00 | 54.71 |
| ATOM | 4441 | NH2 | ARG | 570 | 54.030 | 4.357  | 6.966  | 1.00 | 56.12 |
| ATOM | 4444 | C   | ARG | 570 | 52.818 | -0.877 | 9.133  | 1.00 | 36.53 |
| ATOM | 4445 | O   | ARG | 570 | 51.968 | -1.737 | 8.909  | 1.00 | 34.68 |
| ATOM | 4446 | N   | GLU | 571 | 53.830 | -0.611 | 8.320  | 1.00 | 37.14 |
| ATOM | 4448 | CA  | GLU | 571 | 53.954 | -1.253 | 7.031  | 1.00 | 37.94 |
| ATOM | 4449 | CB  | GLU | 571 | 55.126 | -0.558 | 6.274  | 1.00 | 39.71 |
| ATOM | 4450 | CG  | GLU | 571 | 54.834 | 0.916  | 6.062  | 1.00 | 44.69 |
| ATOM | 4451 | CD  | GLU | 571 | 55.934 | 1.665  | 5.346  | 1.00 | 52.22 |
| ATOM | 4452 | OE1 | GLU | 571 | 57.098 | 1.196  | 5.358  | 1.00 | 54.87 |
| ATOM | 4453 | OE2 | GLU | 571 | 55.629 | 2.743  | 4.777  | 1.00 | 56.37 |
| ATOM | 4454 | C   | GLU | 571 | 54.258 | -2.744 | 7.164  | 1.00 | 36.53 |
| ATOM | 4455 | O   | GLU | 571 | 53.692 | -3.550 | 6.426  | 1.00 | 36.35 |
| ATOM | 4456 | N   | TYR | 572 | 55.105 | -3.105 | 8.120  | 1.00 | 35.77 |
| ATOM | 4458 | CA  | TYR | 572 | 55.456 | -4.499 | 8.371  | 1.00 | 36.28 |
| ATOM | 4459 | CB  | TYR | 572 | 56.446 | -4.555 | 9.534  | 1.00 | 30.27 |
| ATOM | 4460 | CG  | TYR | 572 | 56.859 | -5.925 | 10.006 | 1.00 | 31.65 |
| ATOM | 4461 | CD1 | TYR | 572 | 57.889 | -6.626 | 9.371  | 1.00 | 29.40 |
| ATOM | 4462 | CE1 | TYR | 572 | 58.354 | -7.839 | 9.883  | 1.00 | 29.32 |
| ATOM | 4463 | CD2 | TYR | 572 | 56.292 | -6.480 | 11.161 | 1.00 | 35.17 |
| ATOM | 4464 | CE2 | TYR | 572 | 56.749 | -7.696 | 11.680 | 1.00 | 33.08 |
| ATOM | 4465 | CZ  | TYR | 572 | 57.780 | -8.366 | 11.038 | 1.00 | 35.15 |
| ATOM | 4466 | OH  | TYR | 572 | 58.234 | -9.559 | 11.558 | 1.00 | 36.91 |
| ATOM | 4468 | C   | TYR | 572 | 54.189 | -5.321 | 8.672  | 1.00 | 37.70 |
| ATOM | 4469 | O   | TYR | 572 | 53.942 | -6.369 | 8.068  | 1.00 | 36.82 |
| ATOM | 4470 | N   | LEU | 573 | 53.368 | -4.799 | 9.576  | 1.00 | 37.64 |
| ATOM | 4472 | CA  | LEU | 573 | 52.126 | -5.442 | 9.970  | 1.00 | 36.03 |
| ATOM | 4473 | CB  | LEU | 573 | 51.497 | -4.659 | 11.122 | 1.00 | 36.17 |
| ATOM | 4474 | CG  | LEU | 573 | 52.257 | -4.641 | 12.445 | 1.00 | 36.39 |
| ATOM | 4475 | CD1 | LEU | 573 | 51.590 | -3.665 | 13.412 | 1.00 | 36.17 |
| ATOM | 4476 | CD2 | LEU | 573 | 52.311 | -6.042 | 13.032 | 1.00 | 32.13 |
| ATOM | 4477 | C   | LEU | 573 | 51.117 | -5.562 | 8.822  | 1.00 | 36.33 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4478 | O   | LEU | 573 | 50.477 | -6.596  | 8.649  | 1.00 | 35.19 |
| ATOM | 4479 | N   | GLN | 574 | 50.975 | -4.502  | 8.038  | 1.00 | 37.66 |
| ATOM | 4481 | CA  | GLN | 574 | 50.024 | -4.514  | 6.936  | 1.00 | 41.78 |
| ATOM | 4482 | CB  | GLN | 574 | 49.798 | -3.103  | 6.413  | 1.00 | 43.82 |
| ATOM | 4483 | CG  | GLN | 574 | 48.898 | -2.273  | 7.264  | 1.00 | 45.42 |
| ATOM | 4484 | CD  | GLN | 574 | 48.871 | -0.850  | 6.801  | 1.00 | 49.56 |
| ATOM | 4485 | OE1 | GLN | 574 | 49.456 | -0.506  | 5.772  | 1.00 | 52.22 |
| ATOM | 4486 | NE2 | GLN | 574 | 48.207 | 0.001   | 7.565  | 1.00 | 54.86 |
| ATOM | 4489 | C   | GLN | 574 | 50.401 | -5.427  | 5.783  | 1.00 | 42.89 |
| ATOM | 4490 | O   | GLN | 574 | 49.532 | -5.898  | 5.042  | 1.00 | 46.15 |
| ATOM | 4491 | N   | ALA | 575 | 51.695 | -5.646  | 5.599  | 1.00 | 42.39 |
| ATOM | 4493 | CA  | ALA | 575 | 52.165 | -6.516  | 4.532  | 1.00 | 40.19 |
| ATOM | 4494 | CB  | ALA | 575 | 53.597 | -6.165  | 4.170  | 1.00 | 40.68 |
| ATOM | 4495 | C   | ALA | 575 | 52.088 | -7.970  | 4.971  | 1.00 | 40.49 |
| ATOM | 4496 | O   | ALA | 575 | 52.437 | -8.867  | 4.210  | 1.00 | 43.34 |
| ATOM | 4497 | N   | ARG | 576 | 51.630 | -8.197  | 6.202  | 1.00 | 38.76 |
| ATOM | 4499 | CA  | ARG | 576 | 51.538 | -9.542  | 6.761  | 1.00 | 38.44 |
| ATOM | 4500 | CB  | ARG | 576 | 52.600 | -9.708  | 7.846  | 1.00 | 34.26 |
| ATOM | 4501 | CG  | ARG | 576 | 53.991 | -9.609  | 7.284  | 1.00 | 37.16 |
| ATOM | 4502 | CD  | ARG | 576 | 55.052 | -9.625  | 8.356  | 1.00 | 36.38 |
| ATOM | 4503 | NE  | ARG | 576 | 56.384 | -9.663  | 7.760  | 1.00 | 36.98 |
| ATOM | 4505 | CZ  | ARG | 576 | 56.897 | -8.714  | 6.983  | 1.00 | 38.62 |
| ATOM | 4506 | NH1 | ARG | 576 | 56.204 | -7.618  | 6.689  | 1.00 | 41.41 |
| ATOM | 4509 | NH2 | ARG | 576 | 58.112 | -8.863  | 6.491  | 1.00 | 37.48 |
| ATOM | 4512 | C   | ARG | 576 | 50.165 | -9.860  | 7.321  | 1.00 | 40.55 |
| ATOM | 4513 | O   | ARG | 576 | 50.013 | -10.746 | 8.169  | 1.00 | 43.20 |
| ATOM | 4514 | N   | ARG | 577 | 49.156 | -9.146  | 6.844  | 1.00 | 41.98 |
| ATOM | 4516 | CA  | ARG | 577 | 47.794 | -9.372  | 7.309  | 1.00 | 43.12 |
| ATOM | 4517 | CB  | ARG | 577 | 46.896 | -8.226  | 6.951  | 1.00 | 44.21 |
| ATOM | 4518 | CG  | ARG | 577 | 47.206 | -6.910  | 7.525  | 1.00 | 45.21 |
| ATOM | 4519 | CD  | ARG | 577 | 46.402 | -5.766  | 6.941  | 1.00 | 47.50 |
| ATOM | 4520 | NE  | ARG | 577 | 46.172 | -4.734  | 7.948  | 1.00 | 47.58 |
| ATOM | 4522 | CZ  | ARG | 577 | 45.447 | -3.641  | 7.752  | 1.00 | 47.63 |
| ATOM | 4523 | NH1 | ARG | 577 | 44.882 | -3.421  | 6.574  | 1.00 | 49.05 |
| ATOM | 4526 | NH2 | ARG | 577 | 45.256 | -2.789  | 8.747  | 1.00 | 49.88 |
| ATOM | 4529 | C   | ARG | 577 | 47.241 | -10.715 | 6.821  | 1.00 | 43.10 |
| ATOM | 4530 | O   | ARG | 577 | 47.297 | -11.015 | 5.627  | 1.00 | 43.86 |
| ATOM | 4531 | N   | GLN | 594 | 53.448 | -13.666 | 7.976  | 1.00 | 64.97 |
| ATOM | 4533 | CA  | GLN | 594 | 52.231 | -13.872 | 8.759  | 1.00 | 66.30 |
| ATOM | 4534 | CB  | GLN | 594 | 51.419 | -15.042 | 8.200  | 1.00 | 67.44 |
| ATOM | 4535 | C   | GLN | 594 | 52.582 | -14.116 | 10.224 | 1.00 | 66.02 |
| ATOM | 4536 | O   | GLN | 594 | 53.162 | -15.145 | 10.583 | 1.00 | 67.47 |
| ATOM | 4537 | N   | LEU | 595 | 52.218 | -13.151 | 11.058 | 1.00 | 62.86 |
| ATOM | 4539 | CA  | LEU | 595 | 52.499 | -13.187 | 12.480 | 1.00 | 59.77 |
| ATOM | 4540 | CB  | LEU | 595 | 52.597 | -11.751 | 12.987 | 1.00 | 59.35 |
| ATOM | 4541 | CG  | LEU | 595 | 53.471 | -10.905 | 12.051 | 1.00 | 61.70 |
| ATOM | 4542 | CD1 | LEU | 595 | 53.307 | -9.427  | 12.322 | 1.00 | 64.61 |
| ATOM | 4543 | CD2 | LEU | 595 | 54.923 | -11.324 | 12.175 | 1.00 | 62.38 |
| ATOM | 4544 | C   | LEU | 595 | 51.482 | -13.985 | 13.290 | 1.00 | 57.49 |
| ATOM | 4545 | O   | LEU | 595 | 50.302 | -14.026 | 12.951 | 1.00 | 56.36 |
| ATOM | 4546 | N   | SER | 596 | 51.969 | -14.647 | 14.338 | 1.00 | 55.62 |
| ATOM | 4548 | CA  | SER | 596 | 51.134 | -15.447 | 15.222 | 1.00 | 54.72 |
| ATOM | 4549 | CB  | SER | 596 | 51.905 | -16.669 | 15.721 | 1.00 | 55.13 |
| ATOM | 4550 | OG  | SER | 596 | 52.871 | -16.309 | 16.698 | 1.00 | 54.98 |

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|      |      |     |     |     |        |         |        |      |            |
|------|------|-----|-----|-----|--------|---------|--------|------|------------|
| ATOM | 4552 | C   | SER | 596 | 50.723 | -14.597 | 16.415 | 1.00 | 54.73      |
| ATOM | 4553 | O   | SER | 596 | 51.348 | -13.579 | 16.704 | 1.00 | 53.29      |
| ATOM | 4554 | N   | SER | 597 | 49.704 | -15.051 | 17.137 | 1.00 | 55.09      |
| ATOM | 4556 | CA  | SER | 597 | 49.215 | -14.337 | 18.307 | 1.00 | 56.44      |
| ATOM | 4557 | CB  | SER | 597 | 48.178 | -15.185 | 19.044 | 1.00 | 59.14      |
| ATOM | 4558 | OG  | SER | 597 | 47.455 | -16.009 | 18.138 | 1.00 | 65.57      |
| ATOM | 4560 | C   | SER | 597 | 50.387 | -14.026 | 19.238 | 1.00 | 55.64      |
| ATOM | 4561 | O   | SER | 597 | 50.430 | -12.966 | 19.856 | 1.00 | 56.04      |
| ATOM | 4562 | N   | LYS | 598 | 51.345 | -14.948 | 19.315 | 1.00 | 54.91      |
| ATOM | 4564 | CA  | LYS | 598 | 52.528 | -14.773 | 20.161 | 1.00 | 54.25      |
| ATOM | 4565 | CB  | LYS | 598 | 53.287 | -16.096 | 20.311 | 1.00 | 54.23      |
| ATOM | 4566 | CG  | LYS | 598 | 54.236 | -16.138 | 21.494 | 1.00 | 55.12      |
| ATOM | 4567 | CD  | LYS | 598 | 55.009 | -17.448 | 21.523 | 1.00 | 59.41      |
| ATOM | 4568 | CE  | LYS | 598 | 55.711 | -17.679 | 22.858 | 1.00 | 58.10      |
| ATOM | 4569 | NZ  | LYS | 598 | 54.750 | -17.983 | 23.959 | 1.00 | 56.10      |
| ATOM | 4573 | C   | LYS | 598 | 53.439 | -13.716 | 19.536 | 1.00 | 52.32      |
| ATOM | 4574 | O   | LYS | 598 | 53.986 | -12.869 | 20.249 | 1.00 | 52.23      |
| ATOM | 4575 | N   | ASP | 599 | 53.573 | -13.768 | 18.208 | 1.00 | 47.57      |
| ATOM | 4577 | CA  | ASP | 599 | 54.389 | -12.818 | 17.466 | 1.00 | 45.47      |
| ATOM | 4578 | CB  | ASP | 599 | 54.324 | -13.101 | 15.959 | 1.00 | 49.05      |
| ATOM | 4579 | CG  | ASP | 599 | 55.245 | -14.238 | 15.525 | 1.00 | 54.16      |
| ATOM | 4580 | OD1 | ASP | 599 | 56.242 | -14.503 | 16.223 | 1.00 | 61.34      |
| ATOM | 4581 | OD2 | ASP | 599 | 54.992 | -14.853 | 14.471 | 1.00 | 55.80      |
| ATOM | 4582 | C   | ASP | 599 | 53.933 | -11.383 | 17.721 | 1.00 | 43.55      |
| ATOM | 4583 | O   | ASP | 599 | 54.762 | -10.491 | 17.895 | 1.00 | 44.34      |
| ATOM | 4584 | N   | LEU | 600 | 52.622 | -11.160 | 17.751 | 1.00 | 39.73      |
| ATOM | 4586 | CA  | LEU | 600 | 52.104 | -9.821  | 17.989 | 1.00 | 37.64      |
| ATOM | 4587 | CB  | LEU | 600 | 50.597 | -9.743  | 17.719 | 1.00 | 35.42      |
| ATOM | 4588 | CG  | LEU | 600 | 50.075 | -9.951  | 16.287 | 1.00 | 33.95      |
| ATOM | 4589 | CD1 | LEU | 600 | 48.621 | -9.552  | 16.262 | 1.00 | 36.59      |
| ATOM | 4590 | CD2 | LEU | 600 | 50.841 | -9.139  | 15.265 | 1.00 | 28.40      |
| ATOM | 4591 | C   | LEU | 600 | 52.429 | -9.347  | 19.402 | 1.00 | 38.24      |
| ATOM | 4592 | O   | LEU | 600 | 52.817 | -8.193  | 19.590 | 1.00 | 38.28      |
| ATOM | 4593 | N   | VAL | 601 | 52.305 | -10.235 | 20.391 | 1.00 | 38.77      |
| ATOM | 4595 | CA  | VAL | 601 | 52.610 | -9.855  | 21.772 | 1.00 | 38.87      |
| ATOM | 4596 | CB  | VAL | 601 | 52.121 | -10.906 | 22.812 | 1.00 | 38.03      |
| ATOM | 4597 | CG1 | VAL | 601 | 52.150 | -10.303 | 24.223 | 1.00 | 36.21      |
| ATOM | 4598 | CG2 | VAL | 601 | 50.710 | -11.332 | 22.504 | 1.00 | 39.07      |
| ATOM | 4599 | C   | VAL | 601 | 54.123 | -9.662  | 21.887 | 1.00 | 38.98      |
| ATOM | 4600 | O   | VAL | 601 | 54.601 | -8.757  | 22.580 | 1.00 | 39.93      |
| ATOM | 4601 | N   | SER | 602 | 54.861 | -10.488 | 21.155 | 1.00 | 37.35      |
| ATOM | 4603 | CA  | SER | 602 | 56.311 | -10.422 | 21.126 | 1.00 | 37.11      |
| ATOM | 4604 | CB  | SER | 602 | 56.853 | -11.469 | 20.154 | 1.00 | 39.38      |
| ATOM | 4605 | OG  | SER | 602 | 58.265 | -11.413 | 20.061 | 1.00 | 46.76      |
| ATOM | 4607 | C   | SER | 602 | 56.695 | -9.020  | 20.664 | 1.00 | 35.43      |
| ATOM | 4608 | O   | SER | 602 | 57.493 | -8.339  | 21.315 | 1.00 | 35.01      |
| ATOM | 4609 | N   | CYS | 603 | 56.091 | -8.586  | 19.561 | 1.00 | 33.42      |
| ATOM | 4611 | CA  | CYS | 603 | 56.329 | -7.254  | 19.015 | 1.00 | 32.18      |
| ATOM | 4612 | CB  | CYS | 603 | 55.449 | -7.035  | 17.790 | 1.00 | 32.38      |
| ATOM | 4613 | SG  | CYS | 603 | 55.440 | -5.365  | 17.123 | 0.50 | 35.11 PRT1 |
| ATOM | 4614 | C   | CYS | 603 | 56.074 | -6.167  | 20.059 | 1.00 | 31.20      |
| ATOM | 4615 | O   | CYS | 603 | 56.862 | -5.234  | 20.185 | 1.00 | 32.44      |
| ATOM | 4616 | N   | ALA | 604 | 55.001 | -6.321  | 20.828 | 1.00 | 29.74      |
| ATOM | 4618 | CA  | ALA | 604 | 54.640 | -5.363  | 21.872 | 1.00 | 32.26      |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4619 | CB  | ALA | 604 | 53.232 | -5.675 | 22.412 | 1.00 | 31.75 |
| ATOM | 4620 | C   | ALA | 604 | 55.656 | -5.365 | 23.019 | 1.00 | 33.71 |
| ATOM | 4621 | O   | ALA | 604 | 55.933 | -4.326 | 23.621 | 1.00 | 33.49 |
| ATOM | 4622 | N   | TYR | 605 | 56.186 | -6.544 | 23.326 | 1.00 | 35.56 |
| ATOM | 4624 | CA  | TYR | 605 | 57.176 | -6.709 | 24.388 | 1.00 | 35.49 |
| ATOM | 4625 | CB  | TYR | 605 | 57.447 | -8.206 | 24.617 | 1.00 | 36.12 |
| ATOM | 4626 | CG  | TYR | 605 | 58.562 | -8.495 | 25.591 | 1.00 | 34.75 |
| ATOM | 4627 | CD1 | TYR | 605 | 58.415 | -8.237 | 26.954 | 1.00 | 34.30 |
| ATOM | 4628 | CE1 | TYR | 605 | 59.444 | -8.499 | 27.853 | 1.00 | 36.26 |
| ATOM | 4629 | CD2 | TYR | 605 | 59.773 | -9.021 | 25.150 | 1.00 | 37.39 |
| ATOM | 4630 | CE2 | TYR | 605 | 60.812 | -9.288 | 26.040 | 1.00 | 37.81 |
| ATOM | 4631 | CZ  | TYR | 605 | 60.641 | -9.027 | 27.388 | 1.00 | 38.34 |
| ATOM | 4632 | OH  | TYR | 605 | 61.662 | -9.324 | 28.265 | 1.00 | 42.09 |
| ATOM | 4634 | C   | TYR | 605 | 58.475 | -5.972 | 24.027 | 1.00 | 34.98 |
| ATOM | 4635 | O   | TYR | 605 | 58.981 | -5.171 | 24.822 | 1.00 | 35.83 |
| ATOM | 4636 | N   | GLN | 606 | 58.996 | -6.247 | 22.828 | 1.00 | 33.99 |
| ATOM | 4638 | CA  | GLN | 606 | 60.218 | -5.620 | 22.315 | 1.00 | 33.60 |
| ATOM | 4639 | CB  | GLN | 606 | 60.506 | -6.111 | 20.894 | 1.00 | 31.37 |
| ATOM | 4640 | CG  | GLN | 606 | 60.858 | -7.584 | 20.786 | 1.00 | 32.05 |
| ATOM | 4641 | CD  | GLN | 606 | 61.175 | -8.015 | 19.354 | 1.00 | 30.33 |
| ATOM | 4642 | OE1 | GLN | 606 | 62.145 | -7.558 | 18.754 | 1.00 | 30.84 |
| ATOM | 4643 | NE2 | GLN | 606 | 60.353 | -8.895 | 18.810 | 1.00 | 33.75 |
| ATOM | 4646 | C   | GLN | 606 | 60.123 | -4.079 | 22.321 | 1.00 | 34.86 |
| ATOM | 4647 | O   | GLN | 606 | 61.070 | -3.390 | 22.702 | 1.00 | 37.54 |
| ATOM | 4648 | N   | VAL | 607 | 58.975 | -3.555 | 21.904 | 1.00 | 32.89 |
| ATOM | 4650 | CA  | VAL | 607 | 58.748 | -2.114 | 21.883 | 1.00 | 30.80 |
| ATOM | 4651 | CB  | VAL | 607 | 57.426 | -1.777 | 21.120 | 1.00 | 28.82 |
| ATOM | 4652 | CG1 | VAL | 607 | 57.121 | -0.299 | 21.191 | 1.00 | 25.36 |
| ATOM | 4653 | CG2 | VAL | 607 | 57.541 | -2.204 | 19.661 | 1.00 | 23.37 |
| ATOM | 4654 | C   | VAL | 607 | 58.747 | -1.532 | 23.312 | 1.00 | 30.48 |
| ATOM | 4655 | O   | VAL | 607 | 59.359 | -0.486 | 23.563 | 1.00 | 29.42 |
| ATOM | 4656 | N   | ALA | 608 | 58.106 | -2.225 | 24.255 | 1.00 | 30.07 |
| ATOM | 4658 | CA  | ALA | 608 | 58.064 | -1.761 | 25.646 | 1.00 | 30.14 |
| ATOM | 4659 | CB  | ALA | 608 | 57.027 | -2.548 | 26.452 | 1.00 | 28.49 |
| ATOM | 4660 | C   | ALA | 608 | 59.455 | -1.849 | 26.305 | 1.00 | 31.25 |
| ATOM | 4661 | O   | ALA | 608 | 59.791 | -1.054 | 27.198 | 1.00 | 28.90 |
| ATOM | 4662 | N   | ARG | 609 | 60.257 | -2.819 | 25.870 | 1.00 | 31.61 |
| ATOM | 4664 | CA  | ARG | 609 | 61.608 | -2.979 | 26.393 | 1.00 | 31.99 |
| ATOM | 4665 | CB  | ARG | 609 | 62.253 | -4.245 | 25.856 | 1.00 | 34.93 |
| ATOM | 4666 | CG  | ARG | 609 | 61.606 | -5.507 | 26.317 | 1.00 | 40.82 |
| ATOM | 4667 | CD  | ARG | 609 | 62.633 | -6.606 | 26.397 | 1.00 | 42.68 |
| ATOM | 4668 | NE  | ARG | 609 | 63.275 | -6.621 | 27.705 | 1.00 | 43.85 |
| ATOM | 4670 | CZ  | ARG | 609 | 64.332 | -7.364 | 28.019 | 1.00 | 44.73 |
| ATOM | 4671 | NH1 | ARG | 609 | 64.889 | -8.162 | 27.108 | 1.00 | 41.40 |
| ATOM | 4674 | NH2 | ARG | 609 | 64.803 | -7.341 | 29.260 | 1.00 | 44.85 |
| ATOM | 4677 | C   | ARG | 609 | 62.459 | -1.796 | 25.966 | 1.00 | 33.70 |
| ATOM | 4678 | O   | ARG | 609 | 63.130 | -1.174 | 26.793 | 1.00 | 35.94 |
| ATOM | 4679 | N   | GLY | 610 | 62.459 | -1.511 | 24.663 | 1.00 | 31.22 |
| ATOM | 4681 | CA  | GLY | 610 | 63.232 | -0.391 | 24.157 | 1.00 | 27.21 |
| ATOM | 4682 | C   | GLY | 610 | 62.819 | 0.875  | 24.865 | 1.00 | 25.81 |
| ATOM | 4683 | O   | GLY | 610 | 63.665 | 1.652  | 25.300 | 1.00 | 26.21 |
| ATOM | 4684 | N   | MET | 611 | 61.511 | 1.056  | 25.015 | 1.00 | 27.12 |
| ATOM | 4686 | CA  | MET | 611 | 60.969 | 2.222  | 25.695 | 1.00 | 28.82 |
| ATOM | 4687 | CB  | MET | 611 | 59.457 | 2.288  | 25.524 | 1.00 | 29.29 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4688 | CG  | MET | 611 | 59.004 | 2.706  | 24.135 | 1.00 | 31.07 |
| ATOM | 4689 | SD  | MET | 611 | 59.732 | 4.286  | 23.617 | 1.00 | 28.38 |
| ATOM | 4690 | CE  | MET | 611 | 59.155 | 5.431  | 24.922 | 1.00 | 28.34 |
| ATOM | 4691 | C   | MET | 611 | 61.341 | 2.261  | 27.178 | 1.00 | 30.34 |
| ATOM | 4692 | O   | MET | 611 | 61.596 | 3.334  | 27.730 | 1.00 | 31.73 |
| ATOM | 4693 | N   | GLU | 612 | 61.347 | 1.109  | 27.837 | 1.00 | 32.72 |
| ATOM | 4695 | CA  | GLU | 612 | 61.723 | 1.057  | 29.253 | 1.00 | 35.46 |
| ATOM | 4696 | CB  | GLU | 612 | 61.603 | -0.370 | 29.792 | 1.00 | 34.70 |
| ATOM | 4697 | CG  | GLU | 612 | 62.029 | -0.516 | 31.237 | 1.00 | 32.31 |
| ATOM | 4698 | CD  | GLU | 612 | 62.135 | 1.968  | 31.688 | 1.00 | 33.14 |
| ATOM | 4699 | OE1 | GLU | 612 | 62.546 | -2.834 | 30.883 | 1.00 | 30.79 |
| ATOM | 4700 | OE2 | GLU | 612 | 61.826 | -2.240 | 32.867 | 1.00 | 36.13 |
| ATOM | 4701 | C   | GLU | 612 | 63.178 | 1.544  | 29.353 | 1.00 | 36.43 |
| ATOM | 4702 | O   | GLU | 612 | 63.534 | 2.319  | 30.261 | 1.00 | 35.38 |
| ATOM | 4703 | N   | TYR | 613 | 63.999 | 1.107  | 28.391 | 1.00 | 35.47 |
| ATOM | 4705 | CA  | TYR | 613 | 65.403 | 1.507  | 28.334 | 1.00 | 33.16 |
| ATOM | 4706 | CB  | TYR | 613 | 66.156 | 0.743  | 27.241 | 1.00 | 31.33 |
| ATOM | 4707 | CG  | TYR | 613 | 67.612 | 1.146  | 27.132 | 1.00 | 33.03 |
| ATOM | 4708 | CD1 | TYR | 613 | 68.584 | 0.544  | 27.931 | 1.00 | 36.69 |
| ATOM | 4709 | CE1 | TYR | 613 | 69.930 | 0.927  | 27.851 | 1.00 | 36.82 |
| ATOM | 4710 | CD2 | TYR | 613 | 68.021 | 2.148  | 26.247 | 1.00 | 33.49 |
| ATOM | 4711 | CE2 | TYR | 613 | 69.352 | 2.540  | 26.157 | 1.00 | 34.73 |
| ATOM | 4712 | CZ  | TYR | 613 | 70.307 | 1.927  | 26.963 | 1.00 | 37.07 |
| ATOM | 4713 | OH  | TYR | 613 | 71.632 | 2.318  | 26.896 | 1.00 | 36.77 |
| ATOM | 4715 | C   | TYR | 613 | 65.539 | 3.005  | 28.088 | 1.00 | 31.82 |
| ATOM | 4716 | O   | TYR | 613 | 66.256 | 3.682  | 28.814 | 1.00 | 34.76 |
| ATOM | 4717 | N   | LEU | 614 | 64.836 | 3.536  | 27.090 | 1.00 | 28.44 |
| ATOM | 4719 | CA  | LEU | 614 | 64.931 | 4.956  | 26.793 | 1.00 | 25.67 |
| ATOM | 4720 | CB  | LEU | 614 | 64.089 | 5.319  | 25.569 | 1.00 | 24.75 |
| ATOM | 4721 | CG  | LEU | 614 | 64.545 | 4.778  | 24.208 | 1.00 | 23.73 |
| ATOM | 4722 | CD1 | LEU | 614 | 63.594 | 5.257  | 23.125 | 1.00 | 20.54 |
| ATOM | 4723 | CD2 | LEU | 614 | 65.983 | 5.213  | 23.894 | 1.00 | 23.21 |
| ATOM | 4724 | C   | LEU | 614 | 64.499 | 5.761  | 28.001 | 1.00 | 28.30 |
| ATOM | 4725 | O   | LEU | 614 | 65.110 | 6.770  | 28.345 | 1.00 | 27.09 |
| ATOM | 4726 | N   | ALA | 615 | 63.470 | 5.272  | 28.683 | 1.00 | 32.73 |
| ATOM | 4728 | CA  | ALA | 615 | 62.955 | 5.945  | 29.871 | 1.00 | 34.10 |
| ATOM | 4729 | CB  | ALA | 615 | 61.625 | 5.314  | 30.314 | 1.00 | 33.68 |
| ATOM | 4730 | C   | ALA | 615 | 63.986 | 5.913  | 31.007 | 1.00 | 33.84 |
| ATOM | 4731 | O   | ALA | 615 | 64.112 | 6.885  | 31.753 | 1.00 | 34.95 |
| ATOM | 4732 | N   | SER | 616 | 64.722 | 4.809  | 31.134 | 1.00 | 32.69 |
| ATOM | 4734 | CA  | SER | 616 | 65.738 | 4.703  | 32.175 | 1.00 | 33.50 |
| ATOM | 4735 | CB  | SER | 616 | 66.287 | 3.277  | 32.285 | 1.00 | 28.27 |
| ATOM | 4736 | OG  | SER | 616 | 67.076 | 2.935  | 31.165 | 1.00 | 25.54 |
| ATOM | 4738 | C   | SER | 616 | 66.870 | 5.678  | 31.865 | 1.00 | 35.43 |
| ATOM | 4739 | O   | SER | 616 | 67.637 | 6.061  | 32.755 | 1.00 | 37.32 |
| ATOM | 4740 | N   | LYS | 617 | 66.971 | 6.060  | 30.592 | 1.00 | 34.80 |
| ATOM | 4742 | CA  | LYS | 617 | 67.975 | 7.010  | 30.143 | 1.00 | 33.01 |
| ATOM | 4743 | CB  | LYS | 617 | 68.508 | 6.620  | 28.776 | 1.00 | 33.18 |
| ATOM | 4744 | CG  | LYS | 617 | 69.224 | 5.302  | 28.797 | 1.00 | 35.64 |
| ATOM | 4745 | CD  | LYS | 617 | 70.423 | 5.380  | 29.710 | 1.00 | 40.31 |
| ATOM | 4746 | CE  | LYS | 617 | 71.075 | 4.025  | 29.863 | 1.00 | 43.03 |
| ATOM | 4747 | NZ  | LYS | 617 | 72.426 | 4.152  | 30.449 | 1.00 | 45.54 |
| ATOM | 4751 | C   | LYS | 617 | 67.360 | 8.397  | 30.102 | 1.00 | 32.87 |
| ATOM | 4752 | O   | LYS | 617 | 67.892 | 9.308  | 29.470 | 1.00 | 34.06 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4753 | N   | LYS | 618 | 66.221 | 8.542  | 30.772 | 1.00 | 33.53 |
| ATOM | 4755 | CA  | LYS | 618 | 65.500 | 9.808  | 30.872 | 1.00 | 33.28 |
| ATOM | 4756 | CB  | LYS | 618 | 66.384 | 10.842 | 31.558 | 1.00 | 37.22 |
| ATOM | 4757 | CG  | LYS | 618 | 66.968 | 10.367 | 32.869 | 1.00 | 43.11 |
| ATOM | 4758 | CD  | LYS | 618 | 65.927 | 10.278 | 33.957 | 1.00 | 49.82 |
| ATOM | 4759 | CE  | LYS | 618 | 66.520 | 9.636  | 35.199 | 1.00 | 55.20 |
| ATOM | 4760 | NZ  | LYS | 618 | 65.669 | 9.853  | 36.415 | 1.00 | 61.31 |
| ATOM | 4764 | C   | LYS | 618 | 65.012 | 10.359 | 29.542 | 1.00 | 31.57 |
| ATOM | 4765 | O   | LYS | 618 | 64.651 | 11.530 | 29.455 | 1.00 | 31.10 |
| ATOM | 4766 | N   | CYS | 619 | 64.953 | 9.506  | 28.524 | 1.00 | 31.04 |
| ATOM | 4768 | CA  | CYS | 619 | 64.519 | 9.922  | 27.196 | 1.00 | 29.21 |
| ATOM | 4769 | CB  | CYS | 619 | 65.213 | 9.065  | 26.125 | 1.00 | 28.55 |
| ATOM | 4770 | SG  | CYS | 619 | 64.782 | 9.400  | 24.392 | 1.00 | 26.31 |
| ATOM | 4771 | C   | CYS | 619 | 62.999 | 9.849  | 27.051 | 1.00 | 30.91 |
| ATOM | 4772 | O   | CYS | 619 | 62.376 | 8.827  | 27.364 | 1.00 | 31.18 |
| ATOM | 4773 | N   | ILE | 620 | 62.411 | 10.967 | 26.632 | 1.00 | 29.48 |
| ATOM | 4775 | CA  | ILE | 620 | 60.981 | 11.073 | 26.416 | 1.00 | 29.34 |
| ATOM | 4776 | CB  | ILE | 620 | 60.402 | 12.344 | 27.060 | 1.00 | 28.12 |
| ATOM | 4777 | CG2 | ILE | 620 | 58.944 | 12.535 | 26.645 | 1.00 | 28.76 |
| ATOM | 4778 | CG1 | ILE | 620 | 60.521 | 12.267 | 28.581 | 1.00 | 28.36 |
| ATOM | 4779 | CD1 | ILE | 620 | 60.062 | 13.522 | 29.270 | 1.00 | 25.55 |
| ATOM | 4780 | C   | ILE | 620 | 60.852 | 11.188 | 24.908 | 1.00 | 30.97 |
| ATOM | 4781 | O   | ILE | 620 | 61.254 | 12.193 | 24.336 | 1.00 | 33.88 |
| ATOM | 4782 | N   | HIS | 621 | 60.307 | 10.147 | 24.284 | 1.00 | 31.55 |
| ATOM | 4784 | CA  | HIS | 621 | 60.148 | 10.080 | 22.831 | 1.00 | 31.85 |
| ATOM | 4785 | CB  | HIS | 621 | 59.721 | 8.668  | 22.425 | 1.00 | 28.27 |
| ATOM | 4786 | CG  | HIS | 621 | 59.913 | 8.373  | 20.979 | 1.00 | 24.68 |
| ATOM | 4787 | CD2 | HIS | 621 | 60.608 | 7.383  | 20.356 | 1.00 | 24.39 |
| ATOM | 4788 | ND1 | HIS | 621 | 59.354 | 9.130  | 19.973 | 1.00 | 25.87 |
| ATOM | 4790 | CE1 | HIS | 621 | 59.691 | 8.623  | 18.798 | 1.00 | 27.65 |
| ATOM | 4791 | NE2 | HIS | 621 | 60.444 | 7.571  | 19.007 | 1.00 | 25.80 |
| ATOM | 4793 | C   | HIS | 621 | 59.187 | 11.096 | 22.224 | 1.00 | 34.38 |
| ATOM | 4794 | O   | HIS | 621 | 59.387 | 11.539 | 21.104 | 1.00 | 38.74 |
| ATOM | 4795 | N   | ARG | 622 | 58.080 | 11.374 | 22.898 | 1.00 | 37.17 |
| ATOM | 4797 | CA  | ARG | 622 | 57.093 | 12.346 | 22.425 | 1.00 | 37.27 |
| ATOM | 4798 | CB  | ARG | 622 | 57.718 | 13.746 | 22.298 | 1.00 | 38.63 |
| ATOM | 4799 | CG  | ARG | 622 | 58.261 | 14.271 | 23.601 | 1.00 | 40.47 |
| ATOM | 4800 | CD  | ARG | 622 | 58.661 | 15.739 | 23.530 | 1.00 | 44.76 |
| ATOM | 4801 | NE  | ARG | 622 | 59.129 | 16.174 | 24.842 | 1.00 | 52.09 |
| ATOM | 4803 | CZ  | ARG | 622 | 60.299 | 15.821 | 25.375 | 1.00 | 56.86 |
| ATOM | 4804 | NH1 | ARG | 622 | 61.132 | 15.041 | 24.699 | 1.00 | 61.20 |
| ATOM | 4807 | NH2 | ARG | 622 | 60.606 | 16.167 | 26.624 | 1.00 | 58.19 |
| ATOM | 4810 | C   | ARG | 622 | 56.324 | 11.994 | 21.151 | 1.00 | 37.23 |
| ATOM | 4811 | O   | ARG | 622 | 55.300 | 12.614 | 20.867 | 1.00 | 38.45 |
| ATOM | 4812 | N   | ASP | 623 | 56.805 | 11.035 | 20.364 | 1.00 | 36.55 |
| ATOM | 4814 | CA  | ASP | 623 | 56.075 | 10.652 | 19.160 | 1.00 | 36.52 |
| ATOM | 4815 | CB  | ASP | 623 | 56.581 | 11.403 | 17.910 | 1.00 | 39.68 |
| ATOM | 4816 | CG  | ASP | 623 | 55.635 | 11.247 | 16.687 | 1.00 | 48.75 |
| ATOM | 4817 | OD1 | ASP | 623 | 56.077 | 11.491 | 15.538 | 1.00 | 49.98 |
| ATOM | 4818 | OD2 | ASP | 623 | 54.445 | 10.879 | 16.872 | 1.00 | 49.65 |
| ATOM | 4819 | C   | ASP | 623 | 56.126 | 9.143  | 18.967 | 1.00 | 33.37 |
| ATOM | 4820 | O   | ASP | 623 | 56.325 | 8.650  | 17.864 | 1.00 | 31.77 |
| ATOM | 4821 | N   | LEU | 624 | 55.999 | 8.404  | 20.059 | 1.00 | 30.45 |
| ATOM | 4823 | CA  | LEU | 624 | 56.014 | 6.954  | 19.950 | 1.00 | 30.77 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4824 | CB  | LEU | 624 | 55.983 | 6.307  | 21.342 | 1.00 | 27.43 |
| ATOM | 4825 | CG  | LEU | 624 | 55.949 | 4.778  | 21.441 | 1.00 | 28.69 |
| ATOM | 4826 | CD1 | LEU | 624 | 57.139 | 4.132  | 20.731 | 1.00 | 24.75 |
| ATOM | 4827 | CD2 | LEU | 624 | 55.927 | 4.389  | 22.894 | 1.00 | 27.39 |
| ATOM | 4828 | C   | LEU | 624 | 54.803 | 6.532  | 19.109 | 1.00 | 31.22 |
| ATOM | 4829 | O   | LEU | 624 | 53.680 | 6.952  | 19.380 | 1.00 | 33.44 |
| ATOM | 4830 | N   | ALA | 625 | 55.053 | 5.763  | 18.054 | 1.00 | 28.85 |
| ATOM | 4832 | CA  | ALA | 625 | 54.009 | 5.286  | 17.159 | 1.00 | 26.93 |
| ATOM | 4833 | CB  | ALA | 625 | 53.559 | 6.400  | 16.227 | 1.00 | 25.03 |
| ATOM | 4834 | C   | ALA | 625 | 54.642 | 4.162  | 16.356 | 1.00 | 28.44 |
| ATOM | 4835 | O   | ALA | 625 | 55.863 | 4.065  | 16.317 | 1.00 | 31.32 |
| ATOM | 4836 | N   | ALA | 626 | 53.828 | 3.329  | 15.705 | 1.00 | 29.14 |
| ATOM | 4838 | CA  | ALA | 626 | 54.344 | 2.205  | 14.905 | 1.00 | 28.42 |
| ATOM | 4839 | CB  | ALA | 626 | 53.192 | 1.357  | 14.353 | 1.00 | 27.37 |
| ATOM | 4840 | C   | ALA | 626 | 55.231 | 2.698  | 13.771 | 1.00 | 26.38 |
| ATOM | 4841 | O   | ALA | 626 | 56.195 | 2.041  | 13.395 | 1.00 | 26.12 |
| ATOM | 4842 | N   | ARG | 627 | 54.890 | 3.861  | 13.230 | 1.00 | 27.16 |
| ATOM | 4844 | CA  | ARG | 627 | 55.669 | 4.474  | 12.158 | 1.00 | 28.44 |
| ATOM | 4845 | CB  | ARG | 627 | 55.022 | 5.794  | 11.733 | 1.00 | 28.19 |
| ATOM | 4846 | CG  | ARG | 627 | 54.889 | 6.793  | 12.867 | 1.00 | 30.34 |
| ATOM | 4847 | CD  | ARG | 627 | 54.456 | 8.155  | 12.361 | 1.00 | 34.08 |
| ATOM | 4848 | NE  | ARG | 627 | 54.081 | 9.024  | 13.471 | 1.00 | 35.58 |
| ATOM | 4850 | CZ  | ARG | 627 | 52.849 | 9.123  | 13.950 | 1.00 | 35.55 |
| ATOM | 4851 | NH1 | ARG | 627 | 51.860 | 8.422  | 13.420 | 1.00 | 35.67 |
| ATOM | 4854 | NH2 | ARG | 627 | 52.618 | 9.898  | 14.993 | 1.00 | 40.81 |
| ATOM | 4857 | C   | ARG | 627 | 57.108 | 4.733  | 12.630 | 1.00 | 29.06 |
| ATOM | 4858 | O   | ARG | 627 | 58.044 | 4.737  | 11.825 | 1.00 | 29.80 |
| ATOM | 4859 | N   | ASN | 628 | 57.272 | 4.935  | 13.940 | 1.00 | 28.50 |
| ATOM | 4861 | CA  | ASN | 628 | 58.582 | 5.195  | 14.544 | 1.00 | 26.14 |
| ATOM | 4862 | CB  | ASN | 628 | 58.494 | 6.340  | 15.551 | 1.00 | 23.55 |
| ATOM | 4863 | CG  | ASN | 628 | 58.319 | 7.681  | 14.874 | 1.00 | 27.48 |
| ATOM | 4864 | OD1 | ASN | 628 | 58.874 | 7.919  | 13.800 | 1.00 | 34.12 |
| ATOM | 4865 | ND2 | ASN | 628 | 57.543 | 8.556  | 15.479 | 1.00 | 23.21 |
| ATOM | 4868 | C   | ASN | 628 | 59.263 | 3.965  | 15.153 | 1.00 | 26.76 |
| ATOM | 4869 | O   | ASN | 628 | 60.202 | 4.078  | 15.948 | 1.00 | 26.90 |
| ATOM | 4870 | N   | VAL | 629 | 58.774 | 2.794  | 14.767 | 1.00 | 27.02 |
| ATOM | 4872 | CA  | VAL | 629 | 59.344 | 1.523  | 15.186 | 1.00 | 27.81 |
| ATOM | 4873 | CB  | VAL | 629 | 58.298 | 0.622  | 15.864 | 1.00 | 26.83 |
| ATOM | 4874 | CG1 | VAL | 629 | 58.876 | -0.766 | 16.115 | 1.00 | 20.74 |
| ATOM | 4875 | CG2 | VAL | 629 | 57.836 | 1.259  | 17.165 | 1.00 | 22.49 |
| ATOM | 4876 | C   | VAL | 629 | 59.781 | 0.895  | 13.861 | 1.00 | 28.61 |
| ATOM | 4877 | O   | VAL | 629 | 58.983 | 0.809  | 12.924 | 1.00 | 28.76 |
| ATOM | 4878 | N   | LEU | 630 | 61.059 | 0.557  | 13.746 | 1.00 | 30.35 |
| ATOM | 4880 | CA  | LEU | 630 | 61.576 | -0.033 | 12.514 | 1.00 | 32.42 |
| ATOM | 4881 | CB  | LEU | 630 | 62.824 | 0.725  | 12.040 | 1.00 | 32.28 |
| ATOM | 4882 | CG  | LEU | 630 | 62.697 | 2.249  | 11.880 | 1.00 | 27.75 |
| ATOM | 4883 | CD1 | LEU | 630 | 64.019 | 2.860  | 11.469 | 1.00 | 24.71 |
| ATOM | 4884 | CD2 | LEU | 630 | 61.611 | 2.582  | 10.872 | 1.00 | 27.70 |
| ATOM | 4885 | C   | LEU | 630 | 61.895 | -1.488 | 12.799 | 1.00 | 32.89 |
| ATOM | 4886 | O   | LEU | 630 | 62.167 | -1.838 | 13.943 | 1.00 | 32.32 |
| ATOM | 4887 | N   | VAL | 631 | 61.831 | -2.336 | 11.774 | 1.00 | 34.81 |
| ATOM | 4889 | CA  | VAL | 631 | 62.087 | -3.772 | 11.943 | 1.00 | 33.87 |
| ATOM | 4890 | CB  | VAL | 631 | 60.818 | -4.616 | 11.597 | 1.00 | 31.60 |
| ATOM | 4891 | CG1 | VAL | 631 | 60.929 | -6.004 | 12.197 | 1.00 | 30.84 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4892 | CG2 | VAL | 631 | 59.545 | -3.916  | 12.089 | 1.00 | 25.53 |
| ATOM | 4893 | C   | VAL | 631 | 63.286 | -4.256  | 11.109 | 1.00 | 34.95 |
| ATOM | 4894 | O   | VAL | 631 | 63.365 | -4.009  | 9.892  | 1.00 | 37.01 |
| ATOM | 4895 | N   | THR | 632 | 64.215 | -4.942  | 11.770 | 1.00 | 35.08 |
| ATOM | 4897 | CA  | THR | 632 | 65.418 | -5.444  | 11.104 | 1.00 | 35.96 |
| ATOM | 4898 | CB  | THR | 632 | 66.541 | -5.711  | 12.116 | 1.00 | 34.29 |
| ATOM | 4899 | OG1 | THR | 632 | 66.187 | -6.818  | 12.953 | 1.00 | 32.35 |
| ATOM | 4901 | CG2 | THR | 632 | 66.750 | -4.488  | 12.985 | 1.00 | 33.42 |
| ATOM | 4902 | C   | THR | 632 | 65.162 | -6.712  | 10.300 | 1.00 | 39.32 |
| ATOM | 4903 | O   | THR | 632 | 64.078 | -7.302  | 10.382 | 1.00 | 41.24 |
| ATOM | 4904 | N   | GLU | 633 | 66.153 | -7.123  | 9.511  | 1.00 | 42.32 |
| ATOM | 4906 | CA  | GLU | 633 | 66.030 | -8.335  | 8.703  | 1.00 | 44.34 |
| ATOM | 4907 | CB  | GLU | 633 | 67.314 | -8.609  | 7.912  | 1.00 | 46.06 |
| ATOM | 4908 | CG  | GLU | 633 | 67.205 | -9.767  | 6.898  | 1.00 | 49.87 |
| ATOM | 4909 | CD  | GLU | 633 | 66.380 | -9.445  | 5.629  | 1.00 | 53.04 |
| ATOM | 4910 | OE1 | GLU | 633 | 65.637 | -8.430  | 5.570  | 1.00 | 51.31 |
| ATOM | 4911 | OE2 | GLU | 633 | 66.479 | -10.226 | 4.667  | 1.00 | 55.48 |
| ATOM | 4912 | C   | GLU | 633 | 65.708 | -9.526  | 9.600  | 1.00 | 44.58 |
| ATOM | 4913 | O   | GLU | 633 | 64.974 | -10.423 | 9.207  | 1.00 | 46.56 |
| ATOM | 4914 | N   | ASP | 634 | 66.201 | -9.493  | 10.833 | 1.00 | 44.12 |
| ATOM | 4916 | CA  | ASP | 634 | 65.961 | -10.583 | 11.759 | 1.00 | 44.23 |
| ATOM | 4917 | CB  | ASP | 634 | 67.221 | -10.867 | 12.580 | 1.00 | 50.17 |
| ATOM | 4918 | CG  | ASP | 634 | 68.443 | -11.181 | 11.697 | 1.00 | 56.79 |
| ATOM | 4919 | OD1 | ASP | 634 | 68.363 | -12.113 | 10.857 | 1.00 | 59.62 |
| ATOM | 4920 | OD2 | ASP | 634 | 69.482 | -10.490 | 11.837 | 1.00 | 58.62 |
| ATOM | 4921 | C   | ASP | 634 | 64.756 | -10.331 | 12.644 | 1.00 | 43.26 |
| ATOM | 4922 | O   | ASP | 634 | 64.652 | -10.879 | 13.733 | 1.00 | 43.58 |
| ATOM | 4923 | N   | ASN | 635 | 63.858 | -9.475  | 12.165 | 1.00 | 43.97 |
| ATOM | 4925 | CA  | ASN | 635 | 62.612 | -9.126  | 12.847 | 1.00 | 43.66 |
| ATOM | 4926 | CB  | ASN | 635 | 61.698 | -10.355 | 12.930 | 1.00 | 46.94 |
| ATOM | 4927 | CG  | ASN | 635 | 61.413 | -10.958 | 11.572 | 1.00 | 48.19 |
| ATOM | 4928 | OD1 | ASN | 635 | 60.831 | -10.314 | 10.702 | 1.00 | 51.42 |
| ATOM | 4929 | ND2 | ASN | 635 | 61.832 | -12.198 | 11.380 | 1.00 | 49.44 |
| ATOM | 4932 | C   | ASN | 635 | 62.694 | -8.463  | 14.216 | 1.00 | 43.03 |
| ATOM | 4933 | O   | ASN | 635 | 61.774 | -8.596  | 15.031 | 1.00 | 43.03 |
| ATOM | 4934 | N   | VAL | 636 | 63.763 | -7.712  | 14.467 | 1.00 | 42.69 |
| ATOM | 4936 | CA  | VAL | 636 | 63.915 | -7.034  | 15.756 | 1.00 | 38.30 |
| ATOM | 4937 | CB  | VAL | 636 | 65.406 | -6.861  | 16.134 | 1.00 | 37.92 |
| ATOM | 4938 | CG1 | VAL | 636 | 65.555 | -6.040  | 17.421 | 1.00 | 37.14 |
| ATOM | 4939 | CG2 | VAL | 636 | 66.052 | -8.226  | 16.306 | 1.00 | 37.55 |
| ATOM | 4940 | C   | VAL | 636 | 63.251 | -5.673  | 15.688 | 1.00 | 35.75 |
| ATOM | 4941 | O   | VAL | 636 | 63.486 | -4.926  | 14.746 | 1.00 | 36.28 |
| ATOM | 4942 | N   | MET | 637 | 62.355 | -5.396  | 16.628 | 1.00 | 34.73 |
| ATOM | 4944 | CA  | MET | 637 | 61.672 | -4.103  | 16.680 | 1.00 | 33.22 |
| ATOM | 4945 | CB  | MET | 637 | 60.456 | -4.152  | 17.608 | 1.00 | 34.83 |
| ATOM | 4946 | CG  | MET | 637 | 59.364 | -5.148  | 17.231 | 1.00 | 34.41 |
| ATOM | 4947 | SD  | MET | 637 | 58.661 | -4.926  | 15.589 | 1.00 | 33.19 |
| ATOM | 4948 | CE  | MET | 637 | 58.869 | -6.584  | 14.913 | 1.00 | 29.73 |
| ATOM | 4949 | C   | MET | 637 | 62.677 | -3.107  | 17.250 | 1.00 | 33.75 |
| ATOM | 4950 | O   | MET | 637 | 63.281 | -3.357  | 18.308 | 1.00 | 31.79 |
| ATOM | 4951 | N   | LYS | 638 | 62.839 | -1.980  | 16.558 | 1.00 | 31.83 |
| ATOM | 4953 | CA  | LYS | 638 | 63.774 | -0.939  | 16.965 | 1.00 | 28.17 |
| ATOM | 4954 | CB  | LYS | 638 | 64.986 | -0.930  | 16.038 | 1.00 | 24.98 |
| ATOM | 4955 | CG  | LYS | 638 | 66.006 | -1.967  | 16.400 | 1.00 | 23.17 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4956 | CD  | LYS | 638 | 67.193 | -1.916 | 15.470 | 1.00 | 25.04 |
| ATOM | 4957 | CE  | LYS | 638 | 68.212 | -2.969 | 15.847 | 1.00 | 24.79 |
| ATOM | 4958 | NZ  | LYS | 638 | 68.747 | -2.765 | 17.220 | 1.00 | 24.91 |
| ATOM | 4962 | C   | LYS | 638 | 63.165 | 0.445  | 16.986 | 1.00 | 26.04 |
| ATOM | 4963 | O   | LYS | 638 | 62.803 | 0.958  | 15.936 | 1.00 | 24.44 |
| ATOM | 4964 | N   | ILE | 639 | 63.052 | 1.031  | 18.181 | 1.00 | 25.14 |
| ATOM | 4966 | CA  | ILE | 639 | 62.508 | 2.376  | 18.351 | 1.00 | 25.68 |
| ATOM | 4967 | CB  | ILE | 639 | 62.589 | 2.863  | 19.839 | 1.00 | 27.40 |
| ATOM | 4968 | CG2 | ILE | 639 | 61.875 | 4.189  | 19.984 | 1.00 | 18.94 |
| ATOM | 4969 | CG1 | ILE | 639 | 62.019 | 1.827  | 20.826 | 1.00 | 26.05 |
| ATOM | 4970 | CD1 | ILE | 639 | 60.517 | 1.667  | 20.792 | 1.00 | 25.07 |
| ATOM | 4971 | C   | ILE | 639 | 63.387 | 3.338  | 17.543 | 1.00 | 25.82 |
| ATOM | 4972 | O   | ILE | 639 | 64.619 | 3.283  | 17.642 | 1.00 | 25.76 |
| ATOM | 4973 | N   | ALA | 640 | 62.758 | 4.231  | 16.783 | 1.00 | 25.92 |
| ATOM | 4975 | CA  | ALA | 640 | 63.477 | 5.218  | 15.976 | 1.00 | 26.12 |
| ATOM | 4976 | CB  | ALA | 640 | 63.222 | 4.964  | 14.506 | 1.00 | 26.54 |
| ATOM | 4977 | C   | ALA | 640 | 63.042 | 6.643  | 16.344 | 1.00 | 26.33 |
| ATOM | 4978 | O   | ALA | 640 | 61.996 | 6.828  | 16.974 | 1.00 | 26.20 |
| ATOM | 4979 | N   | ASP | 641 | 63.863 | 7.637  | 15.993 | 1.00 | 26.39 |
| ATOM | 4981 | CA  | ASP | 641 | 63.545 | 9.052  | 16.245 | 1.00 | 28.09 |
| ATOM | 4982 | CB  | ASP | 641 | 62.217 | 9.443  | 15.593 | 1.00 | 31.43 |
| ATOM | 4983 | CG  | ASP | 641 | 62.346 | 9.762  | 14.107 | 1.00 | 36.81 |
| ATOM | 4984 | OD1 | ASP | 641 | 63.409 | 9.478  | 13.500 | 1.00 | 40.24 |
| ATOM | 4985 | OD2 | ASP | 641 | 61.356 | 10.299 | 13.548 | 1.00 | 40.49 |
| ATOM | 4986 | C   | ASP | 641 | 63.455 | 9.442  | 17.700 | 1.00 | 28.40 |
| ATOM | 4987 | O   | ASP | 641 | 62.825 | 10.446 | 18.041 | 1.00 | 29.30 |
| ATOM | 4988 | N   | PHE | 642 | 64.080 | 8.658  | 18.564 | 1.00 | 30.27 |
| ATOM | 4990 | CA  | PHE | 642 | 64.044 | 8.943  | 19.992 | 1.00 | 30.97 |
| ATOM | 4991 | CB  | PHE | 642 | 64.327 | 7.664  | 20.787 | 1.00 | 24.64 |
| ATOM | 4992 | CG  | PHE | 642 | 65.673 | 7.063  | 20.505 | 1.00 | 20.96 |
| ATOM | 4993 | CD1 | PHE | 642 | 66.812 | 7.539  | 21.163 | 1.00 | 16.89 |
| ATOM | 4994 | CD2 | PHE | 642 | 65.806 | 6.026  | 19.576 | 1.00 | 16.23 |
| ATOM | 4995 | CE1 | PHE | 642 | 68.072 | 6.990  | 20.900 | 1.00 | 18.35 |
| ATOM | 4996 | CE2 | PHE | 642 | 67.051 | 5.471  | 19.305 | 1.00 | 18.76 |
| ATOM | 4997 | CZ  | PHE | 642 | 68.195 | 5.954  | 19.970 | 1.00 | 17.91 |
| ATOM | 4998 | C   | PHE | 642 | 65.024 | 10.045 | 20.414 | 1.00 | 34.53 |
| ATOM | 4999 | O   | PHE | 642 | 64.990 | 10.503 | 21.563 | 1.00 | 35.23 |
| ATOM | 5000 | N   | GLY | 643 | 65.910 | 10.433 | 19.500 | 1.00 | 36.40 |
| ATOM | 5002 | CA  | GLY | 643 | 66.888 | 11.455 | 19.799 | 1.00 | 38.28 |
| ATOM | 5003 | C   | GLY | 643 | 66.634 | 12.768 | 19.093 | 1.00 | 41.44 |
| ATOM | 5004 | O   | GLY | 643 | 67.482 | 13.652 | 19.132 | 1.00 | 44.10 |
| ATOM | 5005 | N   | LEU | 644 | 65.461 | 12.921 | 18.484 | 1.00 | 45.44 |
| ATOM | 5007 | CA  | LEU | 644 | 65.131 | 14.144 | 17.748 | 1.00 | 49.14 |
| ATOM | 5008 | CB  | LEU | 644 | 63.832 | 13.975 | 16.969 | 1.00 | 46.26 |
| ATOM | 5009 | CG  | LEU | 644 | 63.823 | 12.967 | 15.836 | 1.00 | 42.90 |
| ATOM | 5010 | CD1 | LEU | 644 | 62.527 | 13.134 | 15.070 | 1.00 | 42.68 |
| ATOM | 5011 | CD2 | LEU | 644 | 65.004 | 13.228 | 14.934 | 1.00 | 45.15 |
| ATOM | 5012 | C   | LEU | 644 | 65.027 | 15.396 | 18.605 | 1.00 | 53.90 |
| ATOM | 5013 | O   | LEU | 644 | 64.488 | 15.356 | 19.715 | 1.00 | 56.54 |
| ATOM | 5014 | N   | ALA | 645 | 65.534 | 16.505 | 18.068 | 1.00 | 57.59 |
| ATOM | 5016 | CA  | ALA | 645 | 65.505 | 17.794 | 18.759 | 1.00 | 60.15 |
| ATOM | 5017 | CB  | ALA | 645 | 66.539 | 18.741 | 18.156 | 1.00 | 59.55 |
| ATOM | 5018 | C   | ALA | 645 | 64.112 | 18.407 | 18.667 | 1.00 | 61.90 |
| ATOM | 5019 | O   | ALA | 645 | 63.393 | 18.500 | 19.663 | 1.00 | 63.83 |

|      |      |     |     |     |        |        |        |      |        |
|------|------|-----|-----|-----|--------|--------|--------|------|--------|
| ATOM | 5020 | N   | ASP | 652 | 52.090 | 22.191 | 14.865 | 1.00 | 89.91  |
| ATOM | 5022 | CA  | ASP | 652 | 50.913 | 22.199 | 14.007 | 1.00 | 89.75  |
| ATOM | 5023 | CB  | ASP | 652 | 51.314 | 22.428 | 12.537 | 1.00 | 88.08  |
| ATOM | 5024 | CG  | ASP | 652 | 50.109 | 22.557 | 11.607 | 1.00 | 87.09  |
| ATOM | 5025 | OD1 | ASP | 652 | 49.028 | 22.996 | 12.052 | 1.00 | 86.85  |
| ATOM | 5026 | OD2 | ASP | 652 | 50.252 | 22.222 | 10.411 | 1.00 | 86.69  |
| ATOM | 5027 | C   | ASP | 652 | 50.145 | 20.890 | 14.156 | 1.00 | 89.98  |
| ATOM | 5028 | O   | ASP | 652 | 50.434 | 19.899 | 13.483 | 1.00 | 90.19  |
| ATOM | 5029 | N   | TYR | 653 | 49.145 | 20.905 | 15.027 | 1.00 | 90.26  |
| ATOM | 5031 | CA  | TYR | 653 | 48.318 | 19.730 | 15.277 | 1.00 | 90.78  |
| ATOM | 5032 | CB  | TYR | 653 | 47.272 | 20.048 | 16.344 | 1.00 | 91.65  |
| ATOM | 5033 | CG  | TYR | 653 | 47.804 | 20.185 | 17.755 | 1.00 | 93.43  |
| ATOM | 5034 | CD1 | TYR | 653 | 47.017 | 20.757 | 18.752 | 1.00 | 94.60  |
| ATOM | 5035 | CE1 | TYR | 653 | 47.477 | 20.885 | 20.058 | 1.00 | 95.35  |
| ATOM | 5036 | CD2 | TYR | 653 | 49.083 | 19.738 | 18.101 | 1.00 | 93.46  |
| ATOM | 5037 | CE2 | TYR | 653 | 49.558 | 19.860 | 19.406 | 1.00 | 94.36  |
| ATOM | 5038 | CZ  | TYR | 653 | 48.748 | 20.435 | 20.378 | 1.00 | 95.26  |
| ATOM | 5039 | OH  | TYR | 653 | 49.220 | 20.554 | 21.669 | 1.00 | 95.00  |
| ATOM | 5041 | C   | TYR | 653 | 47.602 | 19.231 | 14.021 | 1.00 | 90.47  |
| ATOM | 5042 | O   | TYR | 653 | 47.045 | 18.131 | 14.012 | 1.00 | 91.33  |
| ATOM | 5043 | N   | TYR | 654 | 47.632 | 20.031 | 12.962 | 1.00 | 89.21  |
| ATOM | 5045 | CA  | TYR | 654 | 46.954 | 19.673 | 11.727 | 1.00 | 89.09  |
| ATOM | 5046 | CB  | TYR | 654 | 46.205 | 20.893 | 11.198 | 1.00 | 88.23  |
| ATOM | 5047 | CG  | TYR | 654 | 45.275 | 21.499 | 12.209 | 1.00 | 87.65  |
| ATOM | 5048 | CD1 | TYR | 654 | 45.776 | 22.140 | 13.343 | 1.00 | 86.76  |
| ATOM | 5049 | CE1 | TYR | 654 | 44.929 | 22.655 | 14.312 | 1.00 | 87.17  |
| ATOM | 5050 | CD2 | TYR | 654 | 43.895 | 21.396 | 12.067 | 1.00 | 88.61  |
| ATOM | 5051 | CE2 | TYR | 654 | 43.032 | 21.912 | 13.033 | 1.00 | 89.32  |
| ATOM | 5052 | CZ  | TYR | 654 | 43.557 | 22.538 | 14.153 | 1.00 | 88.66  |
| ATOM | 5053 | OH  | TYR | 654 | 42.710 | 23.034 | 15.117 | 1.00 | 89.39  |
| ATOM | 5055 | C   | TYR | 654 | 47.857 | 19.080 | 10.651 | 1.00 | 89.49  |
| ATOM | 5056 | O   | TYR | 654 | 47.396 | 18.772 | 9.552  | 1.00 | 88.37  |
| ATOM | 5057 | N   | LYS | 655 | 49.139 | 18.919 | 10.959 | 1.00 | 90.80  |
| ATOM | 5059 | CA  | LYS | 655 | 50.056 | 18.356 | 9.982  | 1.00 | 93.18  |
| ATOM | 5060 | CB  | LYS | 655 | 51.508 | 18.713 | 10.311 | 1.00 | 95.66  |
| ATOM | 5061 | CG  | LYS | 655 | 52.504 | 18.133 | 9.315  | 1.00 | 99.82  |
| ATOM | 5062 | CD  | LYS | 655 | 53.932 | 18.585 | 9.562  | 1.00 | 103.58 |
| ATOM | 5063 | CE  | LYS | 655 | 54.898 | 17.833 | 8.637  | 1.00 | 106.15 |
| ATOM | 5064 | NZ  | LYS | 655 | 56.325 | 18.246 | 8.821  | 1.00 | 108.43 |
| ATOM | 5068 | C   | LYS | 655 | 49.884 | 16.847 | 9.935  | 1.00 | 93.56  |
| ATOM | 5069 | O   | LYS | 655 | 49.904 | 16.182 | 10.972 | 1.00 | 93.72  |
| ATOM | 5070 | N   | LYS | 656 | 49.670 | 16.320 | 8.735  | 1.00 | 94.19  |
| ATOM | 5072 | CA  | LYS | 656 | 49.500 | 14.886 | 8.545  | 1.00 | 94.84  |
| ATOM | 5073 | CB  | LYS | 656 | 48.628 | 14.620 | 7.320  | 1.00 | 94.64  |
| ATOM | 5074 | CG  | LYS | 656 | 47.155 | 14.874 | 7.542  | 1.00 | 95.54  |
| ATOM | 5075 | CD  | LYS | 656 | 46.402 | 14.709 | 6.241  | 1.00 | 99.56  |
| ATOM | 5076 | CE  | LYS | 656 | 44.926 | 14.449 | 6.473  | 1.00 | 101.77 |
| ATOM | 5077 | NZ  | LYS | 656 | 44.202 | 14.327 | 5.173  | 1.00 | 103.77 |
| ATOM | 5081 | C   | LYS | 656 | 50.859 | 14.225 | 8.368  | 1.00 | 95.18  |
| ATOM | 5082 | O   | LYS | 656 | 51.823 | 14.878 | 7.956  | 1.00 | 95.74  |
| ATOM | 5083 | N   | GLY | 660 | 48.651 | 9.665  | 5.782  | 1.00 | 58.76  |
| ATOM | 5085 | CA  | GLY | 660 | 47.932 | 10.910 | 6.012  | 1.00 | 56.04  |
| ATOM | 5086 | C   | GLY | 660 | 47.241 | 10.937 | 7.364  | 1.00 | 53.90  |
| ATOM | 5087 | O   | GLY | 660 | 46.183 | 11.552 | 7.525  | 1.00 | 53.92  |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5088 | N   | ARG | 661 | 47.838 | 10.243 | 8.328  | 1.00 | 51.87 |
| ATOM | 5090 | CA  | ARG | 661 | 47.297 | 10.177 | 9.679  | 1.00 | 48.23 |
| ATOM | 5091 | CB  | ARG | 661 | 47.755 | 8.891  | 10.377 | 1.00 | 49.74 |
| ATOM | 5092 | CG  | ARG | 661 | 47.506 | 7.620  | 9.566  | 1.00 | 47.59 |
| ATOM | 5093 | CD  | ARG | 661 | 47.561 | 6.390  | 10.446 | 1.00 | 51.85 |
| ATOM | 5094 | NE  | ARG | 661 | 47.584 | 5.155  | 9.663  | 1.00 | 52.94 |
| ATOM | 5096 | CZ  | ARG | 661 | 48.035 | 3.988  | 10.117 | 1.00 | 52.19 |
| ATOM | 5097 | NH1 | ARG | 661 | 48.503 | 3.884  | 11.356 | 1.00 | 52.10 |
| ATOM | 5100 | NH2 | ARG | 661 | 48.036 | 2.926  | 9.327  | 1.00 | 54.43 |
| ATOM | 5103 | C   | ARG | 661 | 47.722 | 11.401 | 10.483 | 1.00 | 43.67 |
| ATOM | 5104 | O   | ARG | 661 | 48.658 | 12.103 | 10.104 | 1.00 | 41.45 |
| ATOM | 5105 | N   | LEU | 662 | 47.019 | 11.656 | 11.579 | 1.00 | 40.27 |
| ATOM | 5107 | CA  | LEU | 662 | 47.310 | 12.799 | 12.437 | 1.00 | 37.15 |
| ATOM | 5108 | CB  | LEU | 662 | 46.021 | 13.533 | 12.783 | 1.00 | 37.39 |
| ATOM | 5109 | CG  | LEU | 662 | 45.301 | 14.149 | 11.588 | 1.00 | 37.67 |
| ATOM | 5110 | CD1 | LEU | 662 | 43.852 | 14.428 | 11.937 | 1.00 | 35.38 |
| ATOM | 5111 | CD2 | LEU | 662 | 46.041 | 15.407 | 11.163 | 1.00 | 39.79 |
| ATOM | 5112 | C   | LEU | 662 | 47.973 | 12.330 | 13.716 | 1.00 | 34.68 |
| ATOM | 5113 | O   | LEU | 662 | 47.327 | 11.718 | 14.568 | 1.00 | 33.33 |
| ATOM | 5114 | N   | PRO | 663 | 49.260 | 12.655 | 13.892 | 1.00 | 34.11 |
| ATOM | 5115 | CD  | PRO | 663 | 50.086 | 13.389 | 12.924 | 1.00 | 33.67 |
| ATOM | 5116 | CA  | PRO | 663 | 50.052 | 12.281 | 15.068 | 1.00 | 33.55 |
| ATOM | 5117 | CB  | PRO | 663 | 51.367 | 13.003 | 14.833 | 1.00 | 32.99 |
| ATOM | 5118 | CG  | PRO | 663 | 51.479 | 12.966 | 13.328 | 1.00 | 36.09 |
| ATOM | 5119 | C   | PRO | 663 | 49.412 | 12.665 | 16.399 | 1.00 | 33.55 |
| ATOM | 5120 | O   | PRO | 663 | 49.683 | 12.036 | 17.426 | 1.00 | 34.11 |
| ATOM | 5121 | N   | VAL | 664 | 48.566 | 13.697 | 16.387 | 1.00 | 32.63 |
| ATOM | 5123 | CA  | VAL | 664 | 47.874 | 14.092 | 17.613 | 1.00 | 32.24 |
| ATOM | 5124 | CB  | VAL | 664 | 46.953 | 15.327 | 17.396 | 1.00 | 33.24 |
| ATOM | 5125 | CG1 | VAL | 664 | 47.779 | 16.583 | 17.252 | 1.00 | 35.01 |
| ATOM | 5126 | CG2 | VAL | 664 | 46.089 | 15.154 | 16.155 | 1.00 | 35.44 |
| ATOM | 5127 | C   | VAL | 664 | 47.072 | 12.896 | 18.150 | 1.00 | 31.08 |
| ATOM | 5128 | O   | VAL | 664 | 46.866 | 12.760 | 19.360 | 1.00 | 31.49 |
| ATOM | 5129 | N   | LYS | 665 | 46.710 | 11.978 | 17.255 | 1.00 | 29.75 |
| ATOM | 5131 | CA  | LYS | 665 | 45.956 | 10.788 | 17.638 | 1.00 | 28.83 |
| ATOM | 5132 | CB  | LYS | 665 | 45.411 | 10.083 | 16.397 | 1.00 | 29.52 |
| ATOM | 5133 | CG  | LYS | 665 | 44.242 | 10.835 | 15.797 | 1.00 | 27.21 |
| ATOM | 5134 | CD  | LYS | 665 | 43.905 | 10.431 | 14.397 | 1.00 | 27.25 |
| ATOM | 5135 | CE  | LYS | 665 | 42.684 | 11.228 | 13.931 | 1.00 | 28.63 |
| ATOM | 5136 | NZ  | LYS | 665 | 42.266 | 10.902 | 12.545 | 1.00 | 25.33 |
| ATOM | 5140 | C   | LYS | 665 | 46.718 | 9.830  | 18.537 | 1.00 | 29.03 |
| ATOM | 5141 | O   | LYS | 665 | 46.152 | 8.869  | 19.046 | 1.00 | 28.37 |
| ATOM | 5142 | N   | TRP | 666 | 47.994 | 10.123 | 18.765 | 1.00 | 30.40 |
| ATOM | 5144 | CA  | TRP | 666 | 48.825 | 9.296  | 19.628 | 1.00 | 31.10 |
| ATOM | 5145 | CB  | TRP | 666 | 50.123 | 8.906  | 18.917 | 1.00 | 29.53 |
| ATOM | 5146 | CG  | TRP | 666 | 49.946 | 7.781  | 17.966 | 1.00 | 27.03 |
| ATOM | 5147 | CD2 | TRP | 666 | 49.407 | 7.853  | 16.638 | 1.00 | 25.06 |
| ATOM | 5148 | CE2 | TRP | 666 | 49.418 | 6.546  | 16.116 | 1.00 | 23.83 |
| ATOM | 5149 | CE3 | TRP | 666 | 48.924 | 8.899  | 15.835 | 1.00 | 26.08 |
| ATOM | 5150 | CD1 | TRP | 666 | 50.257 | 6.475  | 18.186 | 1.00 | 20.75 |
| ATOM | 5151 | NE1 | TRP | 666 | 49.937 | 5.729  | 17.086 | 1.00 | 24.92 |
| ATOM | 5153 | CZ2 | TRP | 666 | 48.962 | 6.245  | 14.832 | 1.00 | 23.95 |
| ATOM | 5154 | CZ3 | TRP | 666 | 48.466 | 8.604  | 14.548 | 1.00 | 29.09 |
| ATOM | 5155 | CH2 | TRP | 666 | 48.491 | 7.282  | 14.060 | 1.00 | 29.22 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5156 | C   | TRP | 666 | 49.174 | 10.049 | 20.896 | 1.00 | 33.20 |
| ATOM | 5157 | O   | TRP | 666 | 49.701 | 9.469  | 21.849 | 1.00 | 34.39 |
| ATOM | 5158 | N   | MET | 667 | 48.862 | 11.340 | 20.910 | 1.00 | 34.82 |
| ATOM | 5160 | CA  | MET | 667 | 49.169 | 12.175 | 22.056 | 1.00 | 36.31 |
| ATOM | 5161 | CB  | MET | 667 | 49.205 | 13.645 | 21.651 | 1.00 | 40.08 |
| ATOM | 5162 | CG  | MET | 667 | 50.475 | 14.047 | 20.931 | 1.00 | 42.41 |
| ATOM | 5163 | SD  | MET | 667 | 50.555 | 15.818 | 20.713 | 1.00 | 51.31 |
| ATOM | 5164 | CE  | MET | 667 | 50.957 | 15.928 | 18.949 | 1.00 | 45.44 |
| ATOM | 5165 | C   | MET | 667 | 48.299 | 12.003 | 23.287 | 1.00 | 37.81 |
| ATOM | 5166 | O   | MET | 667 | 47.081 | 11.871 | 23.195 | 1.00 | 38.91 |
| ATOM | 5167 | N   | ALA | 668 | 48.958 | 11.964 | 24.442 | 1.00 | 36.47 |
| ATOM | 5169 | CA  | ALA | 668 | 48.286 | 11.846 | 25.718 | 1.00 | 37.06 |
| ATOM | 5170 | CB  | ALA | 668 | 49.308 | 11.654 | 26.835 | 1.00 | 35.76 |
| ATOM | 5171 | C   | ALA | 668 | 47.548 | 13.161 | 25.893 | 1.00 | 38.76 |
| ATOM | 5172 | O   | ALA | 668 | 48.000 | 14.201 | 25.414 | 1.00 | 38.04 |
| ATOM | 5173 | N   | PRO | 669 | 46.416 | 13.142 | 26.608 | 1.00 | 41.60 |
| ATOM | 5174 | CD  | PRO | 669 | 45.819 | 11.981 | 27.282 | 1.00 | 41.64 |
| ATOM | 5175 | CA  | PRO | 669 | 45.614 | 14.347 | 26.841 | 1.00 | 43.25 |
| ATOM | 5176 | CB  | PRO | 669 | 44.478 | 13.827 | 27.718 | 1.00 | 45.08 |
| ATOM | 5177 | CG  | PRO | 669 | 44.383 | 12.368 | 27.325 | 1.00 | 44.04 |
| ATOM | 5178 | C   | PRO | 669 | 46.390 | 15.486 | 27.526 | 1.00 | 44.68 |
| ATOM | 5179 | O   | PRO | 669 | 46.304 | 16.644 | 27.111 | 1.00 | 43.79 |
| ATOM | 5180 | N   | GLU | 670 | 47.135 | 15.164 | 28.580 | 1.00 | 44.29 |
| ATOM | 5182 | CA  | GLU | 670 | 47.905 | 16.195 | 29.266 | 1.00 | 45.36 |
| ATOM | 5183 | CB  | GLU | 670 | 48.596 | 15.637 | 30.509 | 1.00 | 46.97 |
| ATOM | 5184 | CG  | GLU | 670 | 49.858 | 14.819 | 30.243 | 1.00 | 50.04 |
| ATOM | 5185 | CD  | GLU | 670 | 49.588 | 13.345 | 30.070 | 1.00 | 51.35 |
| ATOM | 5186 | OE1 | GLU | 670 | 50.512 | 12.552 | 30.327 | 1.00 | 50.99 |
| ATOM | 5187 | OE2 | GLU | 670 | 48.458 | 12.975 | 29.700 | 1.00 | 52.70 |
| ATOM | 5188 | C   | GLU | 670 | 48.942 | 16.802 | 28.320 | 1.00 | 45.63 |
| ATOM | 5189 | O   | GLU | 670 | 49.174 | 18.006 | 28.340 | 1.00 | 44.75 |
| ATOM | 5190 | N   | ALA | 671 | 49.546 | 15.962 | 27.482 | 1.00 | 46.18 |
| ATOM | 5192 | CA  | ALA | 671 | 50.555 | 16.406 | 26.531 | 1.00 | 46.44 |
| ATOM | 5193 | CB  | ALA | 671 | 51.218 | 15.203 | 25.860 | 1.00 | 43.27 |
| ATOM | 5194 | C   | ALA | 671 | 49.931 | 17.313 | 25.483 | 1.00 | 47.85 |
| ATOM | 5195 | O   | ALA | 671 | 50.485 | 18.355 | 25.150 | 1.00 | 47.61 |
| ATOM | 5196 | N   | LEU | 672 | 48.748 | 16.928 | 25.018 | 1.00 | 51.40 |
| ATOM | 5198 | CA  | LEU | 672 | 48.010 | 17.657 | 23.990 | 1.00 | 54.25 |
| ATOM | 5199 | CB  | LEU | 672 | 46.996 | 16.705 | 23.346 | 1.00 | 55.60 |
| ATOM | 5200 | CG  | LEU | 672 | 46.202 | 17.113 | 22.105 | 1.00 | 58.92 |
| ATOM | 5201 | CD1 | LEU | 672 | 47.114 | 17.425 | 20.932 | 1.00 | 58.60 |
| ATOM | 5202 | CD2 | LEU | 672 | 45.269 | 15.977 | 21.753 | 1.00 | 60.32 |
| ATOM | 5203 | C   | LEU | 672 | 47.315 | 18.925 | 24.514 | 1.00 | 55.91 |
| ATOM | 5204 | O   | LEU | 672 | 47.289 | 19.958 | 23.837 | 1.00 | 55.72 |
| ATOM | 5205 | N   | PHE | 673 | 46.782 | 18.846 | 25.730 | 1.00 | 57.88 |
| ATOM | 5207 | CA  | PHE | 673 | 46.089 | 19.977 | 26.342 | 1.00 | 60.07 |
| ATOM | 5208 | CB  | PHE | 673 | 44.873 | 19.484 | 27.127 | 1.00 | 57.08 |
| ATOM | 5209 | CG  | PHE | 673 | 43.876 | 18.742 | 26.290 | 1.00 | 56.39 |
| ATOM | 5210 | CD1 | PHE | 673 | 43.191 | 17.653 | 26.813 | 1.00 | 57.67 |
| ATOM | 5211 | CD2 | PHE | 673 | 43.633 | 19.116 | 24.970 | 1.00 | 55.36 |
| ATOM | 5212 | CE1 | PHE | 673 | 42.281 | 16.939 | 26.036 | 1.00 | 57.42 |
| ATOM | 5213 | CE2 | PHE | 673 | 42.724 | 18.410 | 24.183 | 1.00 | 55.91 |
| ATOM | 5214 | CZ  | PHE | 673 | 42.049 | 17.317 | 24.720 | 1.00 | 56.42 |
| ATOM | 5215 | C   | PHE | 673 | 46.974 | 20.854 | 27.238 | 1.00 | 63.00 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5216 | O   | PHE | 673 | 46.926 | 22.085 | 27.155 | 1.00 | 65.31 |
| ATOM | 5217 | N   | ASP | 674 | 47.786 | 20.223 | 28.081 | 1.00 | 64.08 |
| ATOM | 5219 | CA  | ASP | 674 | 48.656 | 20.954 | 28.999 | 1.00 | 64.97 |
| ATOM | 5220 | CB  | ASP | 674 | 48.545 | 20.375 | 30.409 | 1.00 | 65.13 |
| ATOM | 5221 | CG  | ASP | 674 | 47.128 | 20.358 | 30.923 | 1.00 | 67.33 |
| ATOM | 5222 | OD1 | ASP | 674 | 46.684 | 19.283 | 31.372 | 1.00 | 66.68 |
| ATOM | 5223 | OD2 | ASP | 674 | 46.462 | 21.416 | 30.869 | 1.00 | 69.20 |
| ATOM | 5224 | C   | ASP | 674 | 50.132 | 20.971 | 28.603 | 1.00 | 66.38 |
| ATOM | 5225 | O   | ASP | 674 | 50.984 | 21.304 | 29.434 | 1.00 | 68.44 |
| ATOM | 5226 | N   | ARG | 675 | 50.441 | 20.585 | 27.365 | 1.00 | 65.68 |
| ATOM | 5228 | CA  | ARG | 675 | 51.829 | 20.550 | 26.883 | 1.00 | 63.71 |
| ATOM | 5229 | CB  | ARG | 675 | 52.321 | 21.970 | 26.576 | 1.00 | 63.67 |
| ATOM | 5230 | CG  | ARG | 675 | 51.491 | 22.685 | 25.531 | 1.00 | 67.65 |
| ATOM | 5231 | CD  | ARG | 675 | 52.094 | 24.034 | 25.146 | 1.00 | 73.20 |
| ATOM | 5232 | NE  | ARG | 675 | 53.382 | 23.911 | 24.457 | 1.00 | 74.09 |
| ATOM | 5234 | CZ  | ARG | 675 | 54.159 | 24.939 | 24.122 | 1.00 | 73.41 |
| ATOM | 5235 | NH1 | ARG | 675 | 53.788 | 26.182 | 24.408 | 1.00 | 72.90 |
| ATOM | 5238 | NH2 | ARG | 675 | 55.324 | 24.720 | 23.524 | 1.00 | 71.96 |
| ATOM | 5241 | C   | ARG | 675 | 52.780 | 19.864 | 27.876 | 1.00 | 61.41 |
| ATOM | 5242 | O   | ARG | 675 | 53.960 | 20.208 | 27.966 | 1.00 | 62.62 |
| ATOM | 5243 | N   | ILE | 676 | 52.248 | 18.903 | 28.627 | 1.00 | 59.15 |
| ATOM | 5245 | CA  | ILE | 676 | 53.016 | 18.162 | 29.623 | 1.00 | 56.88 |
| ATOM | 5246 | CB  | ILE | 676 | 52.175 | 17.904 | 30.891 | 1.00 | 56.26 |
| ATOM | 5247 | CG2 | ILE | 675 | 52.871 | 16.904 | 31.807 | 1.00 | 53.11 |
| ATOM | 5248 | CG1 | ILE | 676 | 51.920 | 19.224 | 31.614 | 1.00 | 57.86 |
| ATOM | 5249 | CD1 | ILE | 676 | 51.038 | 19.096 | 32.835 | 1.00 | 61.05 |
| ATOM | 5250 | C   | ILE | 676 | 53.494 | 16.828 | 29.070 | 1.00 | 56.58 |
| ATOM | 5251 | O   | ILE | 676 | 52.727 | 15.869 | 28.985 | 1.00 | 58.12 |
| ATOM | 5252 | N   | TYR | 677 | 54.760 | 16.773 | 28.680 | 1.00 | 54.34 |
| ATOM | 5254 | CA  | TYR | 677 | 55.340 | 15.556 | 28.143 | 1.00 | 51.14 |
| ATOM | 5255 | CB  | TYR | 677 | 56.240 | 15.868 | 26.954 | 1.00 | 52.37 |
| ATOM | 5256 | CG  | TYR | 677 | 55.488 | 16.315 | 25.719 | 1.00 | 56.21 |
| ATOM | 5257 | CD1 | TYR | 677 | 55.187 | 17.660 | 25.512 | 1.00 | 56.78 |
| ATOM | 5258 | CE1 | TYR | 677 | 54.534 | 18.086 | 24.353 | 1.00 | 57.54 |
| ATOM | 5259 | CD2 | TYR | 677 | 55.113 | 15.395 | 24.738 | 1.00 | 57.82 |
| ATOM | 5260 | CE2 | TYR | 677 | 54.458 | 15.809 | 23.571 | 1.00 | 59.32 |
| ATOM | 5261 | CZ  | TYR | 677 | 54.177 | 17.159 | 23.385 | 1.00 | 59.59 |
| ATOM | 5262 | OH  | TYR | 677 | 53.557 | 17.589 | 22.230 | 1.00 | 60.15 |
| ATOM | 5264 | C   | TYR | 677 | 56.124 | 14.854 | 29.224 | 1.00 | 48.64 |
| ATOM | 5265 | O   | TYR | 677 | 57.040 | 15.430 | 29.812 | 1.00 | 50.45 |
| ATOM | 5266 | N   | THR | 678 | 55.733 | 13.621 | 29.510 | 1.00 | 44.59 |
| ATOM | 5268 | CA  | THR | 678 | 56.397 | 12.834 | 30.524 | 1.00 | 42.21 |
| ATOM | 5269 | CB  | THR | 678 | 55.524 | 12.726 | 31.791 | 1.00 | 43.55 |
| ATOM | 5270 | OG1 | THR | 678 | 54.302 | 12.045 | 31.475 | 1.00 | 47.42 |
| ATOM | 5272 | CG2 | THR | 678 | 55.190 | 14.105 | 32.327 | 1.00 | 48.74 |
| ATOM | 5273 | C   | THR | 678 | 56.634 | 11.432 | 29.992 | 1.00 | 39.94 |
| ATOM | 5274 | O   | THR | 678 | 56.207 | 11.085 | 28.892 | 1.00 | 39.34 |
| ATOM | 5275 | N   | HIS | 679 | 57.312 | 10.616 | 30.784 | 1.00 | 38.54 |
| ATOM | 5277 | CA  | HIS | 679 | 57.532 | 9.248  | 30.390 | 1.00 | 38.29 |
| ATOM | 5278 | CB  | HIS | 679 | 58.441 | 8.546  | 31.391 | 1.00 | 39.51 |
| ATOM | 5279 | CG  | HIS | 679 | 59.869 | 8.997  | 31.331 | 1.00 | 43.13 |
| ATOM | 5280 | CD2 | HIS | 679 | 60.630 | 9.668  | 32.233 | 1.00 | 43.49 |
| ATOM | 5281 | ND1 | HIS | 679 | 60.694 | 8.726  | 30.263 | 1.00 | 43.00 |
| ATOM | 5283 | CE1 | HIS | 679 | 61.903 | 9.201  | 30.510 | 1.00 | 43.62 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5284 | NE2 | HIS | 679 | 61.889 | 9.778  | 31.695 | 1.00 | 44.68 |
| ATOM | 5286 | C   | HIS | 679 | 56.147 | 8.599  | 30.359 | 1.00 | 39.42 |
| ATOM | 5287 | O   | HIS | 679 | 55.898 | 7.667  | 29.593 | 1.00 | 40.00 |
| ATOM | 5288 | N   | GLN | 680 | 55.228 | 9.156  | 31.142 | 1.00 | 38.96 |
| ATOM | 5290 | CA  | GLN | 680 | 53.867 | 8.649  | 31.209 | 1.00 | 38.84 |
| ATOM | 5291 | CB  | GLN | 680 | 53.214 | 9.010  | 32.543 | 1.00 | 40.90 |
| ATOM | 5292 | CG  | GLN | 680 | 53.835 | 8.278  | 33.732 | 1.00 | 44.42 |
| ATOM | 5293 | CD  | GLN | 680 | 53.677 | 6.756  | 33.660 | 1.00 | 44.47 |
| ATOM | 5294 | OE1 | GLN | 680 | 52.595 | 6.225  | 33.908 | 1.00 | 45.52 |
| ATOM | 5295 | NE2 | GLN | 680 | 54.767 | 6.050  | 33.348 | 1.00 | 42.06 |
| ATOM | 5298 | C   | GLN | 680 | 53.013 | 9.099  | 30.036 | 1.00 | 38.25 |
| ATOM | 5299 | O   | GLN | 680 | 51.968 | 8.505  | 29.758 | 1.00 | 39.27 |
| ATOM | 5300 | N   | SER | 681 | 53.427 | 10.155 | 29.349 | 1.00 | 37.00 |
| ATOM | 5302 | CA  | SER | 681 | 52.665 | 10.571 | 28.182 | 1.00 | 38.02 |
| ATOM | 5303 | CB  | SER | 681 | 52.929 | 12.034 | 27.813 | 1.00 | 40.29 |
| ATOM | 5304 | OG  | SER | 681 | 54.307 | 12.286 | 27.620 | 1.00 | 47.29 |
| ATOM | 5306 | C   | SER | 681 | 53.066 | 9.620  | 27.051 | 1.00 | 37.43 |
| ATOM | 5307 | O   | SER | 681 | 52.289 | 9.366  | 26.136 | 1.00 | 37.86 |
| ATOM | 5308 | N   | ASP | 682 | 54.281 | 9.077  | 27.162 | 1.00 | 35.23 |
| ATOM | 5310 | CA  | ASP | 682 | 54.800 | 8.106  | 26.205 | 1.00 | 33.24 |
| ATOM | 5311 | CB  | ASP | 682 | 56.284 | 7.820  | 26.464 | 1.00 | 31.85 |
| ATOM | 5312 | CG  | ASP | 682 | 57.224 | 8.732  | 25.677 | 1.00 | 34.18 |
| ATOM | 5313 | OD1 | ASP | 682 | 58.445 | 8.537  | 25.826 | 1.00 | 31.79 |
| ATOM | 5314 | OD2 | ASP | 682 | 56.763 | 9.620  | 24.908 | 1.00 | 29.15 |
| ATOM | 5315 | C   | ASP | 682 | 54.015 | 6.810  | 26.374 | 1.00 | 31.52 |
| ATOM | 5316 | O   | ASP | 682 | 53.788 | 6.087  | 25.411 | 1.00 | 31.93 |
| ATOM | 5317 | N   | VAL | 683 | 53.653 | 6.499  | 27.617 | 1.00 | 33.14 |
| ATOM | 5319 | CA  | VAL | 683 | 52.879 | 5.293  | 27.935 | 1.00 | 32.79 |
| ATOM | 5320 | CB  | VAL | 683 | 52.725 | 5.095  | 29.478 | 1.00 | 34.56 |
| ATOM | 5321 | CG1 | VAL | 683 | 51.653 | 4.059  | 29.790 | 1.00 | 32.39 |
| ATOM | 5322 | CG2 | VAL | 683 | 54.050 | 4.649  | 30.088 | 1.00 | 28.08 |
| ATOM | 5323 | C   | VAL | 683 | 51.506 | 5.338  | 27.245 | 1.00 | 31.45 |
| ATOM | 5324 | O   | VAL | 683 | 51.008 | 4.311  | 26.779 | 1.00 | 30.37 |
| ATOM | 5325 | N   | TRP | 684 | 50.919 | 6.531  | 27.147 | 1.00 | 31.04 |
| ATOM | 5327 | CA  | TRP | 684 | 49.638 | 6.686  | 26.464 | 1.00 | 31.23 |
| ATOM | 5328 | CB  | TRP | 684 | 49.158 | 8.137  | 26.525 | 1.00 | 34.14 |
| ATOM | 5329 | CG  | TRP | 684 | 47.913 | 8.423  | 25.694 | 1.00 | 37.17 |
| ATOM | 5330 | CD2 | TRP | 684 | 46.573 | 8.593  | 26.187 | 1.00 | 38.61 |
| ATOM | 5331 | CE2 | TRP | 684 | 45.755 | 8.888  | 25.064 | 1.00 | 37.91 |
| ATOM | 5332 | CE3 | TRP | 684 | 45.978 | 8.528  | 27.452 | 1.00 | 37.63 |
| ATOM | 5333 | CD1 | TRP | 684 | 47.850 | 8.612  | 24.337 | 1.00 | 37.39 |
| ATOM | 5334 | NE1 | TRP | 684 | 46.560 | 8.894  | 23.956 | 1.00 | 34.76 |
| ATOM | 5336 | CZ2 | TRP | 684 | 44.380 | 9.118  | 25.181 | 1.00 | 34.79 |
| ATOM | 5337 | CZ3 | TRP | 684 | 44.611 | 8.759  | 27.563 | 1.00 | 38.53 |
| ATOM | 5338 | CH2 | TRP | 684 | 43.830 | 9.048  | 26.428 | 1.00 | 37.59 |
| ATOM | 5339 | C   | TRP | 684 | 49.876 | 6.294  | 25.013 | 1.00 | 29.99 |
| ATOM | 5340 | O   | TRP | 684 | 49.254 | 5.356  | 24.503 | 1.00 | 30.82 |
| ATOM | 5341 | N   | SER | 685 | 50.815 | 6.992  | 24.380 | 1.00 | 28.28 |
| ATOM | 5343 | CA  | SER | 685 | 51.174 | 6.738  | 22.986 | 1.00 | 27.54 |
| ATOM | 5344 | CB  | SER | 685 | 52.444 | 7.504  | 22.631 | 1.00 | 26.69 |
| ATOM | 5345 | OG  | SER | 685 | 52.355 | 8.874  | 22.986 | 1.00 | 32.15 |
| ATOM | 5347 | C   | SER | 685 | 51.399 | 5.249  | 22.737 | 1.00 | 26.41 |
| ATOM | 5348 | O   | SER | 685 | 50.968 | 4.709  | 21.713 | 1.00 | 29.52 |
| ATOM | 5349 | N   | PHE | 686 | 52.065 | 4.582  | 23.676 | 1.00 | 26.47 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5351 | CA  | PHE | 686 | 52.325 | 3.151  | 23.563 | 1.00 | 26.35 |
| ATOM | 5352 | CB  | PHE | 686 | 53.167 | 2.668  | 24.754 | 1.00 | 25.01 |
| ATOM | 5353 | CG  | PHE | 686 | 53.447 | 1.182  | 24.742 | 1.00 | 27.24 |
| ATOM | 5354 | CD1 | PHE | 686 | 54.187 | 0.600  | 23.712 | 1.00 | 24.88 |
| ATOM | 5355 | CD2 | PHE | 686 | 52.915 | 0.351  | 25.729 | 1.00 | 24.99 |
| ATOM | 5356 | CE1 | PHE | 686 | 54.389 | -0.783 | 23.655 | 1.00 | 22.77 |
| ATOM | 5357 | CE2 | PHE | 686 | 53.113 | -1.036 | 25.679 | 1.00 | 28.39 |
| ATOM | 5358 | CZ  | PHE | 686 | 53.853 | -1.601 | 24.631 | 1.00 | 22.71 |
| ATOM | 5359 | C   | PHE | 686 | 50.997 | 2.366  | 23.466 | 1.00 | 28.82 |
| ATOM | 5360 | O   | PHE | 686 | 50.892 | 1.398  | 22.696 | 1.00 | 26.41 |
| ATOM | 5361 | N   | GLY | 687 | 49.988 | 2.797  | 24.229 | 1.00 | 29.65 |
| ATOM | 5363 | CA  | GLY | 687 | 48.692 | 2.134  | 24.194 | 1.00 | 29.88 |
| ATOM | 5364 | C   | GLY | 687 | 48.099 | 2.158  | 22.794 | 1.00 | 29.57 |
| ATOM | 5365 | O   | GLY | 687 | 47.560 | 1.165  | 22.300 | 1.00 | 30.38 |
| ATOM | 5366 | N   | VAL | 688 | 48.222 | 3.310  | 22.147 | 1.00 | 29.19 |
| ATOM | 5368 | CA  | VAL | 688 | 47.718 | 3.478  | 20.795 | 1.00 | 25.09 |
| ATOM | 5369 | CB  | VAL | 688 | 47.747 | 4.956  | 20.359 | 1.00 | 22.52 |
| ATOM | 5370 | CG1 | VAL | 688 | 47.106 | 5.115  | 18.985 | 1.00 | 21.13 |
| ATOM | 5371 | CG2 | VAL | 688 | 47.001 | 5.810  | 21.366 | 1.00 | 22.50 |
| ATOM | 5372 | C   | VAL | 688 | 48.574 | 2.636  | 19.865 | 1.00 | 23.82 |
| ATOM | 5373 | O   | VAL | 688 | 48.080 | 2.132  | 18.871 | 1.00 | 25.39 |
| ATOM | 5374 | N   | LEU | 689 | 49.849 | 2.463  | 20.208 | 1.00 | 24.46 |
| ATOM | 5376 | CA  | LEU | 689 | 50.764 | 1.655  | 19.401 | 1.00 | 25.68 |
| ATOM | 5377 | CB  | LEU | 689 | 52.222 | 1.893  | 19.834 | 1.00 | 25.93 |
| ATOM | 5378 | CG  | LEU | 689 | 53.374 | 1.307  | 19.004 | 1.00 | 25.01 |
| ATOM | 5379 | CD1 | LEU | 689 | 54.655 | 2.080  | 19.257 | 1.00 | 25.86 |
| ATOM | 5380 | CD2 | LEU | 689 | 53.593 | -0.145 | 19.318 | 1.00 | 24.90 |
| ATOM | 5381 | C   | LEU | 689 | 50.374 | 0.171  | 19.531 | 1.00 | 26.50 |
| ATOM | 5382 | O   | LEU | 689 | 50.464 | -0.578 | 18.558 | 1.00 | 27.13 |
| ATOM | 5383 | N   | LEU | 690 | 49.927 | -0.234 | 20.724 | 1.00 | 27.76 |
| ATOM | 5385 | CA  | LEU | 690 | 49.481 | -1.610 | 20.980 | 1.00 | 28.59 |
| ATOM | 5386 | CB  | LEU | 690 | 49.087 | -1.800 | 22.447 | 1.00 | 30.38 |
| ATOM | 5387 | CG  | LEU | 690 | 50.121 | -2.065 | 23.545 | 1.00 | 29.57 |
| ATOM | 5388 | CD1 | LEU | 690 | 49.435 | -1.966 | 24.907 | 1.00 | 27.40 |
| ATOM | 5389 | CD2 | LEU | 690 | 50.744 | -3.431 | 23.360 | 1.00 | 28.79 |
| ATOM | 5390 | C   | LEU | 690 | 48.242 | -1.849 | 20.134 | 1.00 | 28.77 |
| ATOM | 5391 | O   | LEU | 690 | 48.055 | -2.922 | 19.573 | 1.00 | 28.07 |
| ATOM | 5392 | N   | TRP | 691 | 47.383 | -0.838 | 20.075 | 1.00 | 29.58 |
| ATOM | 5394 | CA  | TRP | 691 | 46.166 | -0.921 | 19.275 | 1.00 | 30.53 |
| ATOM | 5395 | CB  | TRP | 691 | 45.327 | 0.349  | 19.451 | 1.00 | 28.28 |
| ATOM | 5396 | CG  | TRP | 691 | 43.985 | 0.300  | 18.769 | 1.00 | 25.86 |
| ATOM | 5397 | CD2 | TRP | 691 | 43.702 | 0.689  | 17.421 | 1.00 | 23.99 |
| ATOM | 5398 | CE2 | TRP | 691 | 42.321 | 0.498  | 17.215 | 1.00 | 25.08 |
| ATOM | 5399 | CE3 | TRP | 691 | 44.487 | 1.165  | 16.367 | 1.00 | 20.88 |
| ATOM | 5400 | CD1 | TRP | 691 | 42.791 | -0.090 | 19.314 | 1.00 | 23.72 |
| ATOM | 5401 | NE1 | TRP | 691 | 41.786 | 0.031  | 18.389 | 1.00 | 26.15 |
| ATOM | 5403 | CZ2 | TRP | 691 | 41.704 | 0.788  | 15.997 | 1.00 | 25.07 |
| ATOM | 5404 | CZ3 | TRP | 691 | 43.883 | 1.448  | 15.163 | 1.00 | 22.80 |
| ATOM | 5405 | CH2 | TRP | 691 | 42.501 | 1.251  | 14.982 | 1.00 | 24.95 |
| ATOM | 5406 | C   | TRP | 691 | 46.566 | -1.116 | 17.811 | 1.00 | 30.63 |
| ATOM | 5407 | O   | TRP | 691 | 45.943 | -1.892 | 17.093 | 1.00 | 33.02 |
| ATOM | 5408 | N   | GLU | 692 | 47.625 | -0.431 | 17.386 | 1.00 | 31.00 |
| ATOM | 5410 | CA  | GLU | 692 | 48.130 | -0.545 | 16.018 | 1.00 | 29.00 |
| ATOM | 5411 | CB  | GLU | 692 | 49.285 | 0.426  | 15.778 | 1.00 | 26.55 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5412 | CG  | GLU | 692 | 48.873 | 1.876  | 15.651 | 1.00 | 29.90 |
| ATOM | 5413 | CD  | GLU | 692 | 50.040 | 2.781  | 15.316 | 1.00 | 29.83 |
| ATOM | 5414 | OE1 | GLU | 692 | 50.770 | 3.174  | 16.247 | 1.00 | 32.18 |
| ATOM | 5415 | OE2 | GLU | 692 | 50.227 | 3.110  | 14.124 | 1.00 | 31.57 |
| ATOM | 5416 | C   | GLU | 692 | 48.622 | -1.959 | 15.735 | 1.00 | 29.02 |
| ATOM | 5417 | O   | GLU | 692 | 48.474 | -2.467 | 14.627 | 1.00 | 29.22 |
| ATOM | 5418 | N   | ILE | 693 | 49.258 | -2.573 | 16.724 | 1.00 | 29.54 |
| ATOM | 5420 | CA  | ILE | 693 | 49.766 | -3.933 | 16.555 | 1.00 | 31.01 |
| ATOM | 5421 | CB  | ILE | 693 | 50.634 | -4.360 | 17.757 | 1.00 | 32.36 |
| ATOM | 5422 | CG2 | ILE | 693 | 51.006 | -5.845 | 17.641 | 1.00 | 34.39 |
| ATOM | 5423 | CG1 | ILE | 693 | 51.909 | -3.506 | 17.815 | 1.00 | 30.30 |
| ATOM | 5424 | CD1 | ILE | 693 | 52.696 | -3.693 | 19.082 | 1.00 | 25.66 |
| ATOM | 5425 | C   | ILE | 693 | 48.638 | -4.939 | 16.381 | 1.00 | 30.63 |
| ATOM | 5426 | O   | ILE | 693 | 48.633 | -5.738 | 15.451 | 1.00 | 31.10 |
| ATOM | 5427 | N   | PHE | 694 | 47.644 | -4.858 | 17.248 | 1.00 | 32.60 |
| ATOM | 5429 | CA  | PHE | 694 | 46.543 | -5.793 | 17.172 | 1.00 | 33.86 |
| ATOM | 5430 | CB  | PHE | 694 | 45.938 | -5.970 | 18.563 | 1.00 | 35.66 |
| ATOM | 5431 | CG  | PHE | 694 | 46.941 | -6.499 | 19.559 | 1.00 | 35.70 |
| ATOM | 5432 | CD1 | PHE | 694 | 47.460 | -5.684 | 20.556 | 1.00 | 37.18 |
| ATOM | 5433 | CD2 | PHE | 694 | 47.449 | -7.794 | 19.426 | 1.00 | 34.37 |
| ATOM | 5434 | CE1 | PHE | 694 | 48.473 | -6.150 | 21.392 | 1.00 | 36.90 |
| ATOM | 5435 | CE2 | PHE | 694 | 48.456 | -8.265 | 20.255 | 1.00 | 31.89 |
| ATOM | 5436 | CZ  | PHE | 694 | 48.970 | -7.446 | 21.234 | 1.00 | 34.95 |
| ATOM | 5437 | C   | PHE | 694 | 45.532 | -5.576 | 16.049 | 1.00 | 34.26 |
| ATOM | 5438 | O   | PHE | 694 | 44.702 | -6.442 | 15.787 | 1.00 | 37.52 |
| ATOM | 5439 | N   | THR | 695 | 45.636 | -4.441 | 15.359 | 1.00 | 32.23 |
| ATOM | 5441 | CA  | THR | 695 | 44.775 | -4.160 | 14.215 | 1.00 | 28.08 |
| ATOM | 5442 | CB  | THR | 695 | 44.186 | -2.728 | 14.241 | 1.00 | 25.71 |
| ATOM | 5443 | OG1 | THR | 695 | 45.237 | -1.762 | 14.228 | 1.00 | 24.94 |
| ATOM | 5445 | CG2 | THR | 695 | 43.353 | -2.528 | 15.468 | 1.00 | 23.07 |
| ATOM | 5446 | C   | THR | 695 | 45.615 | -4.348 | 12.955 | 1.00 | 27.53 |
| ATOM | 5447 | O   | THR | 695 | 45.166 | -4.066 | 11.845 | 1.00 | 30.89 |
| ATOM | 5448 | N   | LEU | 696 | 46.833 | -4.848 | 13.145 | 1.00 | 27.73 |
| ATOM | 5450 | CA  | LEU | 696 | 47.781 | -5.081 | 12.061 | 1.00 | 28.99 |
| ATOM | 5451 | CB  | LEU | 696 | 47.370 | -6.297 | 11.226 | 1.00 | 27.78 |
| ATOM | 5452 | CG  | LEU | 696 | 47.379 | -7.591 | 12.047 | 1.00 | 29.89 |
| ATOM | 5453 | CD1 | LEU | 696 | 47.251 | -8.823 | 11.164 | 1.00 | 29.96 |
| ATOM | 5454 | CD2 | LEU | 696 | 48.668 | -7.656 | 12.803 | 1.00 | 30.20 |
| ATOM | 5455 | C   | LEU | 696 | 48.044 | -3.853 | 11.179 | 1.00 | 30.33 |
| ATOM | 5456 | O   | LEU | 696 | 48.006 | -3.926 | 9.948  | 1.00 | 29.41 |
| ATOM | 5457 | N   | GLY | 697 | 48.374 | -2.738 | 11.831 | 1.00 | 30.92 |
| ATOM | 5459 | CA  | GLY | 697 | 48.655 | -1.503 | 11.113 | 1.00 | 30.35 |
| ATOM | 5460 | C   | GLY | 697 | 47.420 | -0.650 | 10.912 | 1.00 | 30.65 |
| ATOM | 5461 | O   | GLY | 697 | 47.359 | 0.178  | 10.000 | 1.00 | 30.01 |
| ATOM | 5462 | N   | GLY | 698 | 46.428 | -0.836 | 11.772 | 1.00 | 30.50 |
| ATOM | 5464 | CA  | GLY | 698 | 45.209 | -0.063 | 11.656 | 1.00 | 30.36 |
| ATOM | 5465 | C   | GLY | 698 | 45.416 | 1.415  | 11.930 | 1.00 | 30.07 |
| ATOM | 5466 | O   | GLY | 698 | 46.320 | 1.809  | 12.666 | 1.00 | 30.56 |
| ATOM | 5467 | N   | SER | 699 | 44.554 | 2.228  | 11.338 | 1.00 | 29.65 |
| ATOM | 5469 | CA  | SER | 699 | 44.597 | 3.674  | 11.485 | 1.00 | 28.42 |
| ATOM | 5470 | CB  | SER | 699 | 44.263 | 4.324  | 10.145 | 1.00 | 24.61 |
| ATOM | 5471 | OG  | SER | 699 | 43.960 | 5.693  | 10.280 | 1.00 | 31.25 |
| ATOM | 5473 | C   | SER | 699 | 43.621 | 4.137  | 12.574 | 1.00 | 28.27 |
| ATOM | 5474 | O   | SER | 699 | 42.406 | 3.930  | 12.474 | 1.00 | 27.14 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5475 | N   | PRO | 700 | 44.160 | 4.682  | 13.675 | 1.00 | 29.29 |
| ATOM | 5476 | CD  | PRO | 700 | 45.587 | 4.867  | 13.999 | 1.00 | 26.09 |
| ATOM | 5477 | CA  | PRO | 700 | 43.303 | 5.155  | 14.764 | 1.00 | 29.30 |
| ATOM | 5478 | CB  | PRO | 700 | 44.319 | 5.624  | 15.812 | 1.00 | 27.68 |
| ATOM | 5479 | CG  | PRO | 700 | 45.531 | 5.982  | 14.985 | 1.00 | 27.85 |
| ATOM | 5480 | C   | PRO | 700 | 42.413 | 6.305  | 14.306 | 1.00 | 29.71 |
| ATOM | 5481 | O   | PRO | 700 | 42.800 | 7.096  | 13.446 | 1.00 | 31.38 |
| ATOM | 5482 | N   | TYR | 701 | 41.204 | 6.357  | 14.854 | 1.00 | 29.51 |
| ATOM | 5484 | CA  | TYR | 701 | 40.246 | 7.419  | 14.548 | 1.00 | 30.25 |
| ATOM | 5485 | CB  | TYR | 701 | 40.559 | 8.647  | 15.405 | 1.00 | 33.50 |
| ATOM | 5486 | CG  | TYR | 701 | 40.321 | 8.413  | 16.866 | 1.00 | 37.84 |
| ATOM | 5487 | CD1 | TYR | 701 | 41.323 | 8.638  | 17.803 | 1.00 | 40.05 |
| ATOM | 5488 | CE1 | TYR | 701 | 41.092 | 8.412  | 19.158 | 1.00 | 42.28 |
| ATOM | 5489 | CD2 | TYR | 701 | 39.084 | 7.965  | 17.310 | 1.00 | 41.54 |
| ATOM | 5490 | CE2 | TYR | 701 | 38.845 | 7.738  | 18.653 | 1.00 | 43.70 |
| ATOM | 5491 | CZ  | TYR | 701 | 39.845 | 7.963  | 19.574 | 1.00 | 42.63 |
| ATOM | 5492 | OH  | TYR | 701 | 39.584 | 7.716  | 20.907 | 1.00 | 45.31 |
| ATOM | 5494 | C   | TYR | 701 | 40.173 | 7.829  | 13.088 | 1.00 | 28.45 |
| ATOM | 5495 | O   | TYR | 701 | 40.356 | 9.001  | 12.760 | 1.00 | 29.03 |
| ATOM | 5496 | N   | PRO | 702 | 39.901 | 6.867  | 12.191 | 1.00 | 28.05 |
| ATOM | 5497 | CD  | PRO | 702 | 39.671 | 5.430  | 12.417 | 1.00 | 26.90 |
| ATOM | 5498 | CA  | PRO | 702 | 39.815 | 7.181  | 10.764 | 1.00 | 27.48 |
| ATOM | 5499 | CB  | PRO | 702 | 39.610 | 5.807  | 10.119 | 1.00 | 27.06 |
| ATOM | 5500 | CG  | PRO | 702 | 38.923 | 5.036  | 11.169 | 1.00 | 28.28 |
| ATOM | 5501 | C   | PRO | 702 | 38.689 | 8.145  | 10.440 | 1.00 | 26.81 |
| ATOM | 5502 | O   | PRO | 702 | 37.554 | 7.953  | 10.865 | 1.00 | 26.26 |
| ATOM | 5503 | N   | GLY | 703 | 39.035 | 9.192  | 9.693  | 1.00 | 28.48 |
| ATOM | 5505 | CA  | GLY | 703 | 38.085 | 10.217 | 9.295  | 1.00 | 26.54 |
| ATOM | 5506 | C   | GLY | 703 | 37.862 | 11.285 | 10.351 | 1.00 | 28.03 |
| ATOM | 5507 | O   | GLY | 703 | 37.110 | 12.231 | 10.108 | 1.00 | 28.93 |
| ATOM | 5508 | N   | VAL | 704 | 38.518 | 11.149 | 11.505 | 1.00 | 28.16 |
| ATOM | 5510 | CA  | VAL | 704 | 38.369 | 12.081 | 12.619 | 1.00 | 29.55 |
| ATOM | 5511 | CB  | VAL | 704 | 38.473 | 11.360 | 13.984 | 1.00 | 28.50 |
| ATOM | 5512 | CG1 | VAL | 704 | 38.330 | 12.350 | 15.135 | 1.00 | 28.07 |
| ATOM | 5513 | CG2 | VAL | 704 | 37.403 | 10.295 | 14.091 | 1.00 | 29.78 |
| ATOM | 5514 | C   | VAL | 704 | 39.375 | 13.227 | 12.588 | 1.00 | 32.00 |
| ATOM | 5515 | O   | VAL | 704 | 40.578 | 13.028 | 12.758 | 1.00 | 33.85 |
| ATOM | 5516 | N   | PRO | 705 | 38.888 | 14.446 | 12.336 | 1.00 | 33.56 |
| ATOM | 5517 | CD  | PRO | 705 | 37.512 | 14.763 | 11.906 | 1.00 | 33.69 |
| ATOM | 5518 | CA  | PRO | 705 | 39.745 | 15.628 | 12.280 | 1.00 | 32.65 |
| ATOM | 5519 | CB  | PRO | 705 | 38.863 | 16.647 | 11.569 | 1.00 | 34.10 |
| ATOM | 5520 | CG  | PRO | 705 | 37.478 | 16.256 | 12.021 | 1.00 | 36.38 |
| ATOM | 5521 | C   | PRO | 705 | 40.164 | 16.081 | 13.668 | 1.00 | 33.22 |
| ATOM | 5522 | O   | PRO | 705 | 39.549 | 15.708 | 14.668 | 1.00 | 33.26 |
| ATOM | 5523 | N   | VAL | 706 | 41.198 | 16.912 | 13.710 | 1.00 | 34.61 |
| ATOM | 5525 | CA  | VAL | 706 | 41.764 | 17.417 | 14.954 | 1.00 | 37.72 |
| ATOM | 5526 | CB  | VAL | 706 | 42.803 | 18.527 | 14.673 | 1.00 | 39.14 |
| ATOM | 5527 | CG1 | VAL | 706 | 43.483 | 18.941 | 15.957 | 1.00 | 39.12 |
| ATOM | 5528 | CG2 | VAL | 706 | 43.836 | 18.038 | 13.670 | 1.00 | 41.07 |
| ATOM | 5529 | C   | VAL | 706 | 40.740 | 17.934 | 15.969 | 1.00 | 38.70 |
| ATOM | 5530 | O   | VAL | 706 | 40.761 | 17.536 | 17.136 | 1.00 | 38.42 |
| ATOM | 5531 | N   | GLU | 707 | 39.834 | 18.796 | 15.517 | 1.00 | 40.43 |
| ATOM | 5533 | CA  | GLU | 707 | 38.823 | 19.375 | 16.395 | 1.00 | 40.66 |
| ATOM | 5534 | CB  | GLU | 707 | 37.973 | 20.379 | 15.621 | 1.00 | 43.40 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5535 | C   | GLU | 707 | 37.940 | 18.316 | 17.028 | 1.00 | 41.03 |
| ATOM | 5536 | O   | GLU | 707 | 37.642 | 18.370 | 18.231 | 1.00 | 41.52 |
| ATOM | 5537 | N   | GLU | 708 | 37.560 | 17.327 | 16.224 | 1.00 | 41.62 |
| ATOM | 5539 | CA  | GLU | 708 | 36.708 | 16.243 | 16.700 | 1.00 | 41.06 |
| ATOM | 5540 | CB  | GLU | 708 | 36.179 | 15.425 | 15.523 | 1.00 | 45.19 |
| ATOM | 5541 | CG  | GLU | 708 | 35.281 | 16.221 | 14.571 | 1.00 | 48.74 |
| ATOM | 5542 | CD  | GLU | 708 | 34.063 | 16.825 | 15.258 | 1.00 | 57.18 |
| ATOM | 5543 | OE1 | GLU | 708 | 33.523 | 16.203 | 16.207 | 1.00 | 54.30 |
| ATOM | 5544 | OE2 | GLU | 708 | 33.646 | 17.934 | 14.837 | 1.00 | 61.76 |
| ATOM | 5545 | C   | GLU | 708 | 37.443 | 15.363 | 17.694 | 1.00 | 38.39 |
| ATOM | 5546 | O   | GLU | 708 | 36.867 | 14.927 | 18.696 | 1.00 | 36.76 |
| ATOM | 5547 | N   | LEU | 709 | 38.725 | 15.131 | 17.434 | 1.00 | 37.78 |
| ATOM | 5549 | CA  | LEU | 709 | 39.555 | 14.327 | 18.324 | 1.00 | 38.13 |
| ATOM | 5550 | CB  | LEU | 709 | 41.007 | 14.255 | 17.820 | 1.00 | 35.45 |
| ATOM | 5551 | CG  | LEU | 709 | 41.984 | 13.560 | 18.786 | 1.00 | 35.57 |
| ATOM | 5552 | CD1 | LEU | 709 | 41.825 | 12.049 | 18.729 | 1.00 | 32.33 |
| ATOM | 5553 | CD2 | LEU | 709 | 43.407 | 13.965 | 18.484 | 1.00 | 31.98 |
| ATOM | 5554 | C   | LEU | 709 | 39.550 | 14.946 | 19.716 | 1.00 | 38.31 |
| ATOM | 5555 | O   | LEU | 709 | 39.362 | 14.250 | 20.717 | 1.00 | 38.16 |
| ATOM | 5556 | N   | PHE | 710 | 39.776 | 16.254 | 19.770 | 1.00 | 40.09 |
| ATOM | 5558 | CA  | PHE | 710 | 39.807 | 16.973 | 21.036 | 1.00 | 43.61 |
| ATOM | 5559 | CB  | PHE | 710 | 39.997 | 18.475 | 20.797 | 1.00 | 48.22 |
| ATOM | 5560 | CG  | PHE | 710 | 41.328 | 18.834 | 20.192 | 1.00 | 51.77 |
| ATOM | 5561 | CD1 | PHE | 710 | 42.395 | 17.939 | 20.231 | 1.00 | 52.94 |
| ATOM | 5562 | CD2 | PHE | 710 | 41.513 | 20.072 | 19.579 | 1.00 | 53.99 |
| ATOM | 5563 | CE1 | PHE | 710 | 43.632 | 18.275 | 19.679 | 1.00 | 56.48 |
| ATOM | 5564 | CE2 | PHE | 710 | 42.746 | 20.422 | 19.021 | 1.00 | 55.72 |
| ATOM | 5565 | CZ  | PHE | 710 | 43.807 | 19.517 | 19.069 | 1.00 | 57.84 |
| ATOM | 5566 | C   | PHE | 710 | 38.519 | 16.726 | 21.796 | 1.00 | 43.35 |
| ATOM | 5567 | O   | PHE | 710 | 38.539 | 16.424 | 22.989 | 1.00 | 43.22 |
| ATOM | 5568 | N   | LYS | 711 | 37.399 | 16.804 | 21.083 | 1.00 | 44.68 |
| ATOM | 5570 | CA  | LYS | 711 | 36.095 | 16.587 | 21.690 | 1.00 | 43.47 |
| ATOM | 5571 | CB  | LYS | 711 | 34.977 | 16.878 | 20.687 | 1.00 | 44.33 |
| ATOM | 5572 | CG  | LYS | 711 | 33.601 | 16.765 | 21.299 | 1.00 | 47.63 |
| ATOM | 5573 | CD  | LYS | 711 | 32.510 | 17.206 | 20.362 | 1.00 | 49.97 |
| ATOM | 5574 | CE  | LYS | 711 | 31.158 | 16.873 | 20.960 | 1.00 | 51.70 |
| ATOM | 5575 | NZ  | LYS | 711 | 30.038 | 17.412 | 20.150 | 1.00 | 57.55 |
| ATOM | 5579 | C   | LYS | 711 | 35.986 | 15.173 | 22.261 | 1.00 | 42.72 |
| ATOM | 5580 | O   | LYS | 711 | 35.589 | 14.999 | 23.420 | 1.00 | 41.16 |
| ATOM | 5581 | N   | LEU | 712 | 36.392 | 14.176 | 21.471 | 1.00 | 42.52 |
| ATOM | 5583 | CA  | LEU | 712 | 36.361 | 12.770 | 21.898 | 1.00 | 42.52 |
| ATOM | 5584 | CB  | LEU | 712 | 36.922 | 11.843 | 20.809 | 1.00 | 41.56 |
| ATOM | 5585 | CG  | LEU | 712 | 36.090 | 11.528 | 19.560 | 1.00 | 41.87 |
| ATOM | 5586 | CD1 | LEU | 712 | 36.902 | 10.620 | 18.636 | 1.00 | 36.28 |
| ATOM | 5587 | CD2 | LEU | 712 | 34.760 | 10.868 | 19.951 | 1.00 | 37.19 |
| ATOM | 5588 | C   | LEU | 712 | 37.158 | 12.564 | 23.180 | 1.00 | 42.34 |
| ATOM | 5589 | O   | LEU | 712 | 36.697 | 11.886 | 24.107 | 1.00 | 40.77 |
| ATOM | 5590 | N   | LEU | 713 | 38.366 | 13.121 | 23.208 | 1.00 | 42.68 |
| ATOM | 5592 | CA  | LEU | 713 | 39.240 | 13.025 | 24.371 | 1.00 | 44.05 |
| ATOM | 5593 | CB  | LEU | 713 | 40.581 | 13.710 | 24.100 | 1.00 | 45.45 |
| ATOM | 5594 | CG  | LEU | 713 | 41.418 | 13.114 | 22.963 | 1.00 | 44.78 |
| ATOM | 5595 | CD1 | LEU | 713 | 42.676 | 13.945 | 22.750 | 1.00 | 41.89 |
| ATOM | 5596 | CD2 | LEU | 713 | 41.757 | 11.660 | 23.282 | 1.00 | 43.21 |
| ATOM | 5597 | C   | LEU | 713 | 38.571 | 13.654 | 25.591 | 1.00 | 44.66 |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5598 | O   | LEU | 713 | 38.562 | 13.051 | 26.662 | 1.00 | 45.70 |
| ATOM | 5599 | N   | LYS | 714 | 37.980 | 14.839 | 25.418 | 1.00 | 43.05 |
| ATOM | 5601 | CA  | LYS | 714 | 37.300 | 15.510 | 26.524 | 1.00 | 42.19 |
| ATOM | 5602 | CB  | LYS | 714 | 36.884 | 16.921 | 26.127 | 1.00 | 42.41 |
| ATOM | 5603 | CG  | LYS | 714 | 38.076 | 17.828 | 25.918 | 1.00 | 46.10 |
| ATOM | 5604 | CD  | LYS | 714 | 37.684 | 19.259 | 25.589 | 1.00 | 49.86 |
| ATOM | 5605 | CE  | LYS | 714 | 38.939 | 20.097 | 25.292 | 1.00 | 52.55 |
| ATOM | 5606 | NZ  | LYS | 714 | 39.889 | 20.148 | 26.459 | 1.00 | 50.17 |
| ATOM | 5610 | C   | LYS | 714 | 36.104 | 14.728 | 27.054 | 1.00 | 42.39 |
| ATOM | 5611 | O   | LYS | 714 | 35.767 | 14.824 | 28.237 | 1.00 | 43.44 |
| ATOM | 5612 | N   | GLU | 715 | 35.480 | 13.934 | 26.192 | 1.00 | 40.44 |
| ATOM | 5614 | CA  | GLU | 715 | 34.342 | 13.118 | 26.593 | 1.00 | 37.90 |
| ATOM | 5615 | CB  | GLU | 715 | 33.408 | 12.893 | 25.411 | 1.00 | 39.54 |
| ATOM | 5616 | CG  | GLU | 715 | 32.800 | 14.174 | 24.846 | 1.00 | 45.20 |
| ATOM | 5617 | CD  | GLU | 715 | 32.032 | 13.936 | 23.563 | 1.00 | 47.85 |
| ATOM | 5618 | OE1 | GLU | 715 | 32.409 | 13.008 | 22.810 | 1.00 | 50.00 |
| ATOM | 5619 | OE2 | GLU | 715 | 31.061 | 14.677 | 23.304 | 1.00 | 50.41 |
| ATOM | 5620 | C   | GLU | 715 | 34.793 | 11.773 | 27.157 | 1.00 | 37.31 |
| ATOM | 5621 | O   | GLU | 715 | 33.970 | 10.907 | 27.450 | 1.00 | 36.79 |
| ATOM | 5622 | N   | GLY | 716 | 36.102 | 11.585 | 27.286 | 1.00 | 36.60 |
| ATOM | 5624 | CA  | GLY | 716 | 36.623 | 10.336 | 27.819 | 1.00 | 37.11 |
| ATOM | 5625 | C   | GLY | 716 | 36.503 | 9.140  | 26.887 | 1.00 | 38.30 |
| ATOM | 5626 | O   | GLY | 716 | 36.603 | 7.994  | 27.340 | 1.00 | 36.84 |
| ATOM | 5627 | N   | HIS | 717 | 36.307 | 9.404  | 25.592 | 1.00 | 40.24 |
| ATOM | 5629 | CA  | HIS | 717 | 36.167 | 8.353  | 24.579 | 1.00 | 42.63 |
| ATOM | 5630 | CB  | HIS | 717 | 35.800 | 8.951  | 23.217 | 1.00 | 43.11 |
| ATOM | 5631 | CG  | HIS | 717 | 35.745 | 7.941  | 22.112 | 1.00 | 44.69 |
| ATOM | 5632 | CD2 | HIS | 717 | 34.756 | 7.101  | 21.717 | 1.00 | 45.13 |
| ATOM | 5633 | ND1 | HIS | 717 | 36.818 | 7.683  | 21.283 | 1.00 | 47.31 |
| ATOM | 5635 | CE1 | HIS | 717 | 36.494 | 6.728  | 20.426 | 1.00 | 47.61 |
| ATOM | 5636 | NE2 | HIS | 717 | 35.250 | 6.357  | 20.670 | 1.00 | 44.95 |
| ATOM | 5638 | C   | HIS | 717 | 37.451 | 7.567  | 24.413 | 1.00 | 44.84 |
| ATOM | 5639 | O   | HIS | 717 | 38.528 | 8.152  | 24.295 | 1.00 | 46.79 |
| ATOM | 5640 | N   | ARG | 718 | 37.313 | 6.247  | 24.337 | 1.00 | 45.44 |
| ATOM | 5642 | CA  | ARG | 718 | 38.440 | 5.345  | 24.170 | 1.00 | 45.36 |
| ATOM | 5643 | CB  | ARG | 718 | 38.614 | 4.496  | 25.434 | 1.00 | 43.82 |
| ATOM | 5644 | CG  | ARG | 718 | 38.976 | 5.308  | 26.697 | 1.00 | 44.52 |
| ATOM | 5645 | CD  | ARG | 718 | 40.284 | 6.065  | 26.476 | 1.00 | 45.02 |
| ATOM | 5646 | NE  | ARG | 718 | 40.718 | 6.856  | 27.630 | 1.00 | 43.12 |
| ATOM | 5648 | CZ  | ARG | 718 | 40.550 | 8.173  | 27.744 | 1.00 | 44.77 |
| ATOM | 5649 | NH1 | ARG | 718 | 39.940 | 8.859  | 26.784 | 1.00 | 44.67 |
| ATOM | 5652 | NH2 | ARG | 718 | 41.067 | 8.826  | 28.777 | 1.00 | 46.39 |
| ATOM | 5655 | C   | ARG | 718 | 38.124 | 4.474  | 22.952 | 1.00 | 45.94 |
| ATOM | 5656 | O   | ARG | 718 | 36.953 | 4.243  | 22.645 | 1.00 | 47.59 |
| ATOM | 5657 | N   | MET | 719 | 39.145 | 4.077  | 22.204 | 1.00 | 45.34 |
| ATOM | 5659 | CA  | MET | 719 | 38.925 | 3.253  | 21.029 | 1.00 | 44.28 |
| ATOM | 5660 | CB  | MET | 719 | 40.198 | 3.125  | 20.185 | 1.00 | 42.30 |
| ATOM | 5661 | CG  | MET | 719 | 40.575 | 4.399  | 19.441 | 1.00 | 38.44 |
| ATOM | 5662 | SD  | MET | 719 | 42.000 | 4.225  | 18.368 | 1.00 | 36.97 |
| ATOM | 5663 | CE  | MET | 719 | 43.317 | 4.219  | 19.511 | 1.00 | 36.09 |
| ATOM | 5664 | C   | MET | 719 | 38.415 | 1.877  | 21.418 | 1.00 | 46.21 |
| ATOM | 5665 | O   | MET | 719 | 38.708 | 1.393  | 22.517 | 1.00 | 43.29 |
| ATOM | 5666 | N   | ASP | 720 | 37.659 | 1.267  | 20.498 | 1.00 | 48.79 |
| ATOM | 5668 | CA  | ASP | 720 | 37.069 | -0.063 | 20.666 | 1.00 | 48.87 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 5669 | CB  | ASP | 720 | 36.099 | -0.369  | 19.513 | 1.00 | 54.01 |
| ATOM | 5670 | CG  | ASP | 720 | 34.766 | 0.374   | 19.632 | 1.00 | 59.30 |
| ATOM | 5671 | OD1 | ASP | 720 | 34.762 | 1.583   | 19.981 | 1.00 | 62.96 |
| ATOM | 5672 | OD2 | ASP | 720 | 33.716 | -0.259  | 19.354 | 1.00 | 58.64 |
| ATOM | 5673 | C   | ASP | 720 | 38.126 | -1.154  | 20.688 | 1.00 | 46.10 |
| ATOM | 5674 | O   | ASP | 720 | 39.213 | -0.992  | 20.125 | 1.00 | 44.13 |
| ATOM | 5675 | N   | LYS | 721 | 37.788 | -2.272  | 21.322 | 1.00 | 45.27 |
| ATOM | 5677 | CA  | LYS | 721 | 38.689 | -3.413  | 21.404 | 1.00 | 43.25 |
| ATOM | 5678 | CB  | LYS | 721 | 38.172 | -4.436  | 22.416 | 1.00 | 42.02 |
| ATOM | 5679 | CG  | LYS | 721 | 39.072 | -5.651  | 22.557 | 1.00 | 46.57 |
| ATOM | 5680 | CD  | LYS | 721 | 38.602 | -6.576  | 23.666 | 1.00 | 49.96 |
| ATOM | 5681 | CE  | LYS | 721 | 38.300 | -7.971  | 23.141 | 1.00 | 51.80 |
| ATOM | 5682 | NZ  | LYS | 721 | 37.937 | -8.920  | 24.240 | 1.00 | 56.08 |
| ATOM | 5686 | C   | LYS | 721 | 38.769 | -4.055  | 20.031 | 1.00 | 43.67 |
| ATOM | 5687 | O   | LYS | 721 | 37.736 | -4.313  | 19.394 | 1.00 | 44.02 |
| ATOM | 5688 | N   | PRO | 722 | 39.995 | -4.233  | 19.513 | 1.00 | 43.94 |
| ATOM | 5689 | CD  | PRO | 722 | 41.281 | -3.711  | 20.001 | 1.00 | 45.90 |
| ATOM | 5690 | CA  | PRO | 722 | 40.159 | -4.853  | 19.198 | 1.00 | 43.96 |
| ATOM | 5691 | CB  | PRO | 722 | 41.665 | -4.720  | 17.941 | 1.00 | 43.11 |
| ATOM | 5692 | CG  | PRO | 722 | 42.046 | -3.509  | 18.715 | 1.00 | 45.16 |
| ATOM | 5693 | C   | PRO | 722 | 39.772 | -6.317  | 18.295 | 1.00 | 43.09 |
| ATOM | 5694 | O   | PRO | 722 | 39.764 | -6.888  | 19.385 | 1.00 | 41.32 |
| ATOM | 5695 | N   | SER | 723 | 39.382 | -5.902  | 17.170 | 1.00 | 45.79 |
| ATOM | 5697 | CA  | SER | 723 | 39.044 | -9.316  | 17.144 | 1.00 | 46.67 |
| ATOM | 5698 | CB  | SER | 723 | 38.303 | -8.664  | 15.957 | 1.00 | 44.69 |
| ATOM | 5699 | OG  | SER | 723 | 39.131 | -8.414  | 14.736 | 1.00 | 49.79 |
| ATOM | 5701 | C   | SER | 723 | 40.422 | -8.961  | 17.146 | 1.00 | 46.90 |
| ATOM | 5702 | O   | SER | 723 | 41.360 | -9.411  | 16.581 | 1.00 | 49.81 |
| ATOM | 5703 | N   | ASN | 724 | 40.540 | -10.131 | 17.760 | 1.00 | 49.28 |
| ATOM | 5705 | CA  | ASN | 724 | 41.826 | -10.804 | 17.849 | 1.00 | 52.10 |
| ATOM | 5706 | CB  | ASN | 724 | 42.480 | -10.947 | 16.469 | 1.00 | 55.86 |
| ATOM | 5707 | CG  | ASN | 724 | 41.774 | -11.957 | 15.592 | 1.00 | 58.72 |
| ATOM | 5708 | OD1 | ASN | 724 | 41.686 | -13.140 | 15.941 | 1.00 | 62.28 |
| ATOM | 5709 | ND2 | ASN | 724 | 41.258 | -11.503 | 14.449 | 1.00 | 59.56 |
| ATOM | 5712 | C   | ASN | 724 | 42.665 | -9.931  | 18.770 | 1.00 | 51.97 |
| ATOM | 5713 | O   | ASN | 724 | 43.621 | -9.274  | 18.369 | 1.00 | 53.85 |
| ATOM | 5714 | N   | CYS | 725 | 42.202 | -9.859  | 20.004 | 1.00 | 51.02 |
| ATOM | 5716 | CA  | CYS | 725 | 42.853 | -9.094  | 21.049 | 1.00 | 50.18 |
| ATOM | 5717 | CB  | CYS | 725 | 42.708 | -7.583  | 20.811 | 1.00 | 47.75 |
| ATOM | 5718 | SG  | CYS | 725 | 43.424 | -6.577  | 22.130 | 1.00 | 44.37 |
| ATOM | 5719 | C   | CYS | 725 | 42.131 | -9.507  | 22.315 | 1.00 | 49.31 |
| ATOM | 5720 | O   | CYS | 725 | 40.916 | -9.371  | 22.417 | 1.00 | 49.90 |
| ATOM | 5721 | N   | THR | 726 | 42.866 | -10.088 | 23.249 | 1.00 | 48.52 |
| ATOM | 5723 | CA  | THR | 726 | 42.262 | -10.541 | 24.490 | 1.00 | 49.58 |
| ATOM | 5724 | CB  | THR | 726 | 43.251 | -11.444 | 25.291 | 1.00 | 49.84 |
| ATOM | 5725 | OG1 | THR | 726 | 44.236 | -10.648 | 25.976 | 1.00 | 49.05 |
| ATOM | 5727 | CG2 | THR | 726 | 43.982 | -12.363 | 24.352 | 1.00 | 47.96 |
| ATOM | 5728 | C   | THR | 726 | 41.788 | -9.369  | 25.356 | 1.00 | 49.93 |
| ATOM | 5729 | O   | THR | 726 | 42.305 | -8.256  | 25.244 | 1.00 | 51.55 |
| ATOM | 5730 | N   | ASN | 727 | 40.829 | -9.622  | 26.242 | 1.00 | 50.48 |
| ATOM | 5732 | CA  | ASN | 727 | 40.335 | -8.577  | 27.144 | 1.00 | 52.17 |
| ATOM | 5733 | CB  | ASN | 727 | 39.190 | -9.099  | 28.016 | 1.00 | 57.57 |
| ATOM | 5734 | CG  | ASN | 727 | 39.533 | -10.409 | 28.714 | 1.00 | 66.49 |
| ATOM | 5735 | OD1 | ASN | 727 | 40.709 | -10.786 | 28.833 | 1.00 | 70.43 |

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|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 5736 | ND2 | ASN | 727 | 38.500 | -11.122 | 29.175 | 1.00 | 68.43 |
| ATOM | 5739 | C   | ASN | 727 | 41.491 | -8.091  | 28.023 | 1.00 | 50.29 |
| ATOM | 5740 | O   | ASN | 727 | 41.467 | -6.976  | 28.540 | 1.00 | 49.88 |
| ATOM | 5741 | N   | GLU | 728 | 42.518 | -8.927  | 28.163 | 1.00 | 50.60 |
| ATOM | 5743 | CA  | GLU | 728 | 43.700 | -8.597  | 28.956 | 1.00 | 49.33 |
| ATOM | 5744 | CB  | GLU | 728 | 44.529 | -9.859  | 29.220 | 1.00 | 50.44 |
| ATOM | 5745 | CG  | GLU | 728 | 45.802 | -9.600  | 30.008 | 1.00 | 55.30 |
| ATOM | 5746 | CD  | GLU | 728 | 46.577 | -10.862 | 30.354 | 1.00 | 57.40 |
| ATOM | 5747 | OE1 | GLU | 728 | 46.716 | -11.754 | 29.489 | 1.00 | 56.75 |
| ATOM | 5748 | OE2 | GLU | 728 | 47.062 | -10.950 | 31.502 | 1.00 | 59.85 |
| ATOM | 5749 | C   | GLU | 728 | 44.539 | -7.552  | 28.212 | 1.00 | 47.08 |
| ATOM | 5750 | O   | GLU | 728 | 44.888 | -6.512  | 28.776 | 1.00 | 48.02 |
| ATOM | 5751 | N   | LEU | 729 | 44.846 | -7.821  | 26.945 | 1.00 | 43.34 |
| ATOM | 5753 | CA  | LEU | 729 | 45.630 | -6.891  | 26.129 | 1.00 | 42.01 |
| ATOM | 5754 | CB  | LEU | 729 | 45.899 | -7.500  | 24.751 | 1.00 | 39.46 |
| ATOM | 5755 | CG  | LEU | 729 | 46.911 | -8.639  | 24.772 | 1.00 | 40.31 |
| ATOM | 5756 | CD1 | LEU | 729 | 46.782 | -9.482  | 23.531 | 1.00 | 42.21 |
| ATOM | 5757 | CD2 | LEU | 729 | 48.314 | -8.068  | 24.900 | 1.00 | 42.49 |
| ATOM | 5758 | C   | LEU | 729 | 44.901 | -5.557  | 25.980 | 1.00 | 40.61 |
| ATOM | 5759 | O   | LEU | 729 | 45.510 | -4.481  | 25.953 | 1.00 | 38.33 |
| ATOM | 5760 | N   | TYR | 730 | 43.580 | -5.637  | 25.909 | 1.00 | 39.07 |
| ATOM | 5762 | CA  | TYR | 730 | 42.761 | -4.455  | 25.773 | 1.00 | 38.61 |
| ATOM | 5763 | CB  | TYR | 730 | 41.341 | -4.837  | 25.369 | 1.00 | 36.79 |
| ATOM | 5764 | CG  | TYR | 730 | 40.454 | -3.646  | 25.125 | 1.00 | 37.08 |
| ATOM | 5765 | CD1 | TYR | 730 | 40.760 | -2.721  | 24.127 | 1.00 | 32.86 |
| ATOM | 5766 | CE1 | TYR | 730 | 39.961 | -1.616  | 23.912 | 1.00 | 29.79 |
| ATOM | 5767 | CD2 | TYR | 730 | 39.328 | -3.420  | 25.916 | 1.00 | 36.99 |
| ATOM | 5768 | CE2 | TYR | 730 | 38.522 | -2.312  | 25.704 | 1.00 | 36.69 |
| ATOM | 5769 | CZ  | TYR | 730 | 38.853 | -1.412  | 24.706 | 1.00 | 32.69 |
| ATOM | 5770 | OH  | TYR | 730 | 38.044 | -0.320  | 24.492 | 1.00 | 38.80 |
| ATOM | 5772 | C   | TYR | 730 | 42.767 | -3.662  | 27.080 | 1.00 | 39.75 |
| ATOM | 5773 | O   | TYR | 730 | 42.781 | -2.430  | 27.065 | 1.00 | 40.53 |
| ATOM | 5774 | N   | MET | 731 | 42.738 | -4.360  | 28.210 | 1.00 | 41.88 |
| ATOM | 5776 | CA  | MET | 731 | 42.778 | -3.684  | 29.509 | 1.00 | 45.34 |
| ATOM | 5777 | CB  | MET | 731 | 42.658 | -4.697  | 30.646 | 1.00 | 53.46 |
| ATOM | 5778 | CG  | MET | 731 | 41.253 | -5.248  | 30.836 | 1.00 | 64.30 |
| ATOM | 5779 | SD  | MET | 731 | 40.134 | -4.095  | 31.653 | 1.00 | 75.78 |
| ATOM | 5780 | CE  | MET | 731 | 40.657 | -4.338  | 33.370 | 1.00 | 69.70 |
| ATOM | 5781 | C   | MET | 731 | 44.099 | -2.927  | 29.614 | 1.00 | 41.53 |
| ATOM | 5782 | O   | MET | 731 | 44.157 | -1.814  | 30.138 | 1.00 | 37.91 |
| ATOM | 5783 | N   | MET | 732 | 45.156 | -3.545  | 29.098 | 1.00 | 40.48 |
| ATOM | 5785 | CA  | MET | 732 | 46.478 | -2.937  | 29.091 | 1.00 | 40.23 |
| ATOM | 5786 | CB  | MET | 732 | 47.508 | -3.872  | 28.436 | 1.00 | 40.29 |
| ATOM | 5787 | CG  | MET | 732 | 48.929 | -3.307  | 28.390 | 1.00 | 38.07 |
| ATOM | 5788 | SD  | MET | 732 | 50.171 | -4.522  | 27.908 | 1.00 | 37.65 |
| ATOM | 5789 | CE  | MET | 732 | 50.407 | -5.343  | 29.431 | 1.00 | 37.90 |
| ATOM | 5790 | C   | MET | 732 | 46.378 | -1.623  | 28.317 | 1.00 | 38.96 |
| ATOM | 5791 | O   | MET | 732 | 46.843 | -0.591  | 28.790 | 1.00 | 41.36 |
| ATOM | 5792 | N   | MET | 733 | 45.744 | -1.663  | 27.148 | 1.00 | 36.94 |
| ATOM | 5794 | CA  | MET | 733 | 45.574 | -0.463  | 26.340 | 1.00 | 35.19 |
| ATOM | 5795 | CB  | MET | 733 | 44.796 | -0.769  | 25.070 | 1.00 | 36.07 |
| ATOM | 5796 | CG  | MET | 733 | 45.549 | -1.577  | 24.048 | 1.00 | 35.99 |
| ATOM | 5797 | SD  | MET | 733 | 44.471 | -1.851  | 22.641 | 1.00 | 40.05 |
| ATOM | 5798 | CE  | MET | 733 | 45.244 | -3.351  | 21.909 | 1.00 | 33.13 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5799 | C   | MET | 733 | 44.800 | 0.560  | 27.141 | 1.00 | 37.29 |
| ATOM | 5800 | O   | MET | 733 | 45.207 | 1.719  | 27.245 | 1.00 | 39.14 |
| ATOM | 5801 | N   | ARG | 734 | 43.690 | 0.125  | 27.735 | 1.00 | 38.76 |
| ATOM | 5803 | CA  | ARG | 734 | 42.849 | 1.014  | 28.532 | 1.00 | 39.49 |
| ATOM | 5804 | CB  | ARG | 734 | 41.577 | 0.297  | 28.993 | 1.00 | 40.33 |
| ATOM | 5805 | CG  | ARG | 734 | 40.699 | -0.225 | 27.856 | 1.00 | 38.02 |
| ATOM | 5806 | CD  | ARG | 734 | 40.256 | 0.877  | 26.909 | 1.00 | 42.72 |
| ATOM | 5807 | NE  | ARG | 734 | 39.443 | 1.898  | 27.567 | 1.00 | 48.85 |
| ATOM | 5809 | CZ  | ARG | 734 | 38.120 | 1.838  | 27.700 | 1.00 | 52.35 |
| ATOM | 5810 | NH1 | ARG | 734 | 37.435 | 0.811  | 27.222 | 1.00 | 54.79 |
| ATOM | 5813 | NH2 | ARG | 734 | 37.477 | 2.804  | 28.338 | 1.00 | 54.69 |
| ATOM | 5816 | C   | ARG | 734 | 43.627 | 1.587  | 29.715 | 1.00 | 38.70 |
| ATOM | 5817 | O   | ARG | 734 | 43.445 | 2.757  | 30.068 | 1.00 | 40.92 |
| ATOM | 5818 | N   | ASP | 735 | 44.530 | 0.782  | 30.276 | 1.00 | 38.76 |
| ATOM | 5820 | CA  | ASP | 735 | 45.379 | 1.208  | 31.399 | 1.00 | 38.60 |
| ATOM | 5821 | CB  | ASP | 735 | 46.325 | 0.087  | 31.825 | 1.00 | 41.34 |
| ATOM | 5822 | CG  | ASP | 735 | 45.622 | -1.022 | 32.574 | 1.00 | 44.66 |
| ATOM | 5823 | OD1 | ASP | 735 | 46.048 | -2.194 | 32.428 | 1.00 | 43.15 |
| ATOM | 5824 | OD2 | ASP | 735 | 44.657 | -0.713 | 33.313 | 1.00 | 44.46 |
| ATOM | 5825 | C   | ASP | 735 | 46.215 | 2.385  | 30.938 | 1.00 | 37.76 |
| ATOM | 5826 | O   | ASP | 735 | 46.235 | 3.446  | 31.585 | 1.00 | 36.35 |
| ATOM | 5827 | N   | CYS | 736 | 46.890 | 2.182  | 29.805 | 1.00 | 35.39 |
| ATOM | 5829 | CA  | CYS | 736 | 47.730 | 3.196  | 29.181 | 1.00 | 34.77 |
| ATOM | 5830 | CB  | CYS | 736 | 48.379 | 2.652  | 27.916 | 1.00 | 30.62 |
| ATOM | 5831 | SG  | CYS | 736 | 49.453 | 1.261  | 28.198 | 1.00 | 30.96 |
| ATOM | 5832 | C   | CYS | 736 | 46.938 | 4.429  | 28.814 | 1.00 | 35.98 |
| ATOM | 5833 | O   | CYS | 736 | 47.516 | 5.491  | 28.606 | 1.00 | 37.38 |
| ATOM | 5834 | N   | TRP | 737 | 45.620 | 4.290  | 28.713 | 1.00 | 38.50 |
| ATOM | 5836 | CA  | TRP | 737 | 44.772 | 5.423  | 28.370 | 1.00 | 40.16 |
| ATOM | 5837 | CB  | TRP | 737 | 43.791 | 5.028  | 27.271 | 1.00 | 38.41 |
| ATOM | 5838 | CG  | TRP | 737 | 44.453 | 4.586  | 26.011 | 1.00 | 39.33 |
| ATOM | 5839 | CD2 | TRP | 737 | 43.893 | 3.718  | 25.020 | 1.00 | 39.64 |
| ATOM | 5840 | CE2 | TRP | 737 | 44.852 | 3.583  | 23.992 | 1.00 | 39.97 |
| ATOM | 5841 | CE3 | TRP | 737 | 42.672 | 3.040  | 24.900 | 1.00 | 37.06 |
| ATOM | 5842 | CD1 | TRP | 737 | 45.695 | 4.932  | 25.556 | 1.00 | 39.56 |
| ATOM | 5843 | NE1 | TRP | 737 | 45.941 | 4.336  | 24.343 | 1.00 | 38.61 |
| ATOM | 5845 | CZ2 | TRP | 737 | 44.627 | 2.795  | 22.859 | 1.00 | 38.78 |
| ATOM | 5846 | CZ3 | TRP | 737 | 42.452 | 2.261  | 23.778 | 1.00 | 38.90 |
| ATOM | 5847 | CH2 | TRP | 737 | 43.426 | 2.145  | 22.772 | 1.00 | 38.18 |
| ATOM | 5848 | C   | TRP | 737 | 44.028 | 6.029  | 29.563 | 1.00 | 41.30 |
| ATOM | 5849 | O   | TRP | 737 | 42.979 | 6.658  | 29.398 | 1.00 | 41.45 |
| ATOM | 5850 | N   | HIS | 738 | 44.575 | 5.873  | 30.763 | 1.00 | 43.01 |
| ATOM | 5852 | CA  | HIS | 738 | 43.932 | 6.423  | 31.948 | 1.00 | 44.64 |
| ATOM | 5853 | CB  | HIS | 738 | 44.454 | 5.735  | 33.205 | 1.00 | 46.20 |
| ATOM | 5854 | CG  | HIS | 738 | 43.742 | 6.154  | 34.458 | 1.00 | 50.35 |
| ATOM | 5855 | CD2 | HIS | 738 | 43.473 | 7.379  | 34.963 | 1.00 | 49.09 |
| ATOM | 5856 | ND1 | HIS | 738 | 43.220 | 5.244  | 35.355 | 1.00 | 49.94 |
| ATOM | 5858 | CE1 | HIS | 738 | 42.659 | 5.899  | 36.357 | 1.00 | 52.92 |
| ATOM | 5859 | NE2 | HIS | 738 | 42.798 | 7.194  | 36.146 | 1.00 | 46.91 |
| ATOM | 5861 | C   | HIS | 738 | 44.174 | 7.921  | 32.037 | 1.00 | 45.26 |
| ATOM | 5862 | O   | HIS | 738 | 45.314 | 8.356  | 32.021 | 1.00 | 45.31 |
| ATOM | 5863 | N   | ALA | 739 | 43.099 | 8.686  | 32.224 | 1.00 | 46.61 |
| ATOM | 5865 | CA  | ALA | 739 | 43.155 | 10.150 | 32.322 | 1.00 | 48.49 |
| ATOM | 5866 | CB  | ALA | 739 | 41.823 | 10.681 | 32.790 | 1.00 | 49.69 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5867 | C   | ALA | 739 | 44.272 | 10.682 | 33.224 | 1.00 | 50.77 |
| ATOM | 5868 | O   | ALA | 739 | 45.004 | 11.601 | 32.846 | 1.00 | 51.77 |
| ATOM | 5869 | N   | VAL | 740 | 44.336 | 10.138 | 34.439 | 1.00 | 51.47 |
| ATOM | 5871 | CA  | VAL | 740 | 45.352 | 10.485 | 35.439 | 1.00 | 51.09 |
| ATOM | 5872 | CB  | VAL | 740 | 44.897 | 10.075 | 36.850 | 1.00 | 52.40 |
| ATOM | 5873 | CG1 | VAL | 740 | 45.847 | 10.624 | 37.878 | 1.00 | 53.38 |
| ATOM | 5874 | CG2 | VAL | 740 | 43.485 | 10.544 | 37.105 | 1.00 | 55.18 |
| ATOM | 5875 | C   | VAL | 740 | 46.649 | 9.727  | 35.130 | 1.00 | 48.99 |
| ATOM | 5876 | O   | VAL | 740 | 46.773 | 8.534  | 35.440 | 1.00 | 47.72 |
| ATOM | 5877 | N   | PRO | 741 | 47.646 | 10.421 | 34.565 | 1.00 | 48.31 |
| ATOM | 5878 | CD  | PRO | 741 | 47.603 | 11.861 | 34.253 | 1.00 | 47.84 |
| ATOM | 5879 | CA  | PRO | 741 | 48.949 | 9.852  | 34.197 | 1.00 | 48.51 |
| ATOM | 5880 | CB  | PRO | 741 | 49.762 | 11.087 | 33.828 | 1.00 | 46.83 |
| ATOM | 5881 | CG  | PRO | 741 | 48.714 | 12.000 | 33.255 | 1.00 | 46.21 |
| ATOM | 5882 | C   | PRO | 741 | 49.641 | 9.016  | 35.275 | 1.00 | 49.12 |
| ATOM | 5883 | O   | PRO | 741 | 50.449 | 8.139  | 34.955 | 1.00 | 46.57 |
| ATOM | 5884 | N   | SER | 742 | 49.327 | 9.290  | 36.541 | 1.00 | 49.47 |
| ATOM | 5886 | CA  | SER | 742 | 49.928 | 8.557  | 37.651 | 1.00 | 49.50 |
| ATOM | 5887 | CB  | SER | 742 | 49.760 | 9.326  | 38.963 | 1.00 | 51.06 |
| ATOM | 5888 | OG  | SER | 742 | 48.403 | 9.638  | 39.209 | 1.00 | 53.81 |
| ATOM | 5890 | C   | SER | 742 | 49.339 | 7.159  | 37.787 | 1.00 | 48.81 |
| ATOM | 5891 | O   | SER | 742 | 49.926 | 6.284  | 38.427 | 1.00 | 49.45 |
| ATOM | 5892 | N   | GLN | 743 | 48.164 | 6.959  | 37.203 | 1.00 | 47.82 |
| ATOM | 5894 | CA  | GLN | 743 | 47.529 | 5.658  | 37.273 | 1.00 | 46.34 |
| ATOM | 5895 | CB  | GLN | 743 | 46.022 | 5.791  | 37.432 | 1.00 | 49.74 |
| ATOM | 5896 | CG  | GLN | 743 | 45.519 | 5.305  | 38.784 | 1.00 | 55.41 |
| ATOM | 5897 | CD  | GLN | 743 | 46.178 | 5.030  | 39.947 | 1.00 | 59.15 |
| ATOM | 5898 | OE1 | GLN | 743 | 46.905 | 5.425  | 40.748 | 1.00 | 59.02 |
| ATOM | 5899 | NE2 | GLN | 743 | 45.922 | 7.338  | 40.052 | 1.00 | 60.03 |
| ATOM | 5902 | C   | GLN | 743 | 47.874 | 4.768  | 36.095 | 1.00 | 44.34 |
| ATOM | 5903 | O   | GLN | 743 | 47.548 | 3.578  | 36.114 | 1.00 | 44.64 |
| ATOM | 5904 | N   | ARG | 744 | 48.497 | 5.339  | 35.059 | 1.00 | 42.83 |
| ATOM | 5906 | CA  | ARG | 744 | 48.914 | 4.559  | 33.880 | 1.00 | 40.34 |
| ATOM | 5907 | CB  | ARG | 744 | 49.349 | 5.469  | 32.724 | 1.00 | 35.84 |
| ATOM | 5908 | CG  | ARG | 744 | 48.296 | 6.406  | 32.190 | 1.00 | 28.25 |
| ATOM | 5909 | CD  | ARG | 744 | 48.906 | 7.383  | 31.216 | 1.00 | 22.56 |
| ATOM | 5910 | NE  | ARG | 744 | 47.948 | 8.437  | 30.922 | 1.00 | 28.09 |
| ATOM | 5912 | CZ  | ARG | 744 | 48.258 | 9.658  | 30.493 | 1.00 | 32.83 |
| ATOM | 5913 | NH1 | ARG | 744 | 49.524 | 10.001 | 30.278 | 1.00 | 34.44 |
| ATOM | 5916 | NH2 | ARG | 744 | 47.307 | 10.569 | 30.360 | 1.00 | 32.00 |
| ATOM | 5919 | C   | ARG | 744 | 50.110 | 3.712  | 34.295 | 1.00 | 41.58 |
| ATOM | 5920 | O   | ARG | 744 | 50.906 | 4.124  | 35.145 | 1.00 | 45.48 |
| ATOM | 5921 | N   | PRO | 745 | 50.223 | 2.489  | 33.754 | 1.00 | 40.97 |
| ATOM | 5922 | CD  | PRO | 745 | 49.345 | 1.749  | 32.831 | 1.00 | 39.90 |
| ATOM | 5923 | CA  | PRO | 745 | 51.381 | 1.685  | 34.157 | 1.00 | 39.77 |
| ATOM | 5924 | CB  | PRO | 745 | 51.063 | 0.311  | 33.558 | 1.00 | 39.31 |
| ATOM | 5925 | CG  | PRO | 745 | 50.255 | 0.642  | 32.344 | 1.00 | 40.98 |
| ATOM | 5926 | C   | PRO | 745 | 52.664 | 2.269  | 33.573 | 1.00 | 38.44 |
| ATOM | 5927 | O   | PRO | 745 | 52.631 | 3.009  | 32.595 | 1.00 | 39.64 |
| ATOM | 5928 | N   | THR | 746 | 53.783 | 2.001  | 34.224 | 1.00 | 37.50 |
| ATOM | 5930 | CA  | THR | 746 | 55.066 | 2.462  | 33.728 | 1.00 | 37.56 |
| ATOM | 5931 | CB  | THR | 746 | 56.108 | 2.571  | 34.869 | 1.00 | 38.58 |
| ATOM | 5932 | OG1 | THR | 746 | 56.286 | 1.285  | 35.487 | 1.00 | 43.28 |
| ATOM | 5934 | CG2 | THR | 746 | 55.666 | 3.567  | 35.899 | 1.00 | 34.64 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5935 | C   | THR | 746 | 55.546 | 1.393  | 32.739 | 1.00 | 36.49 |
| ATOM | 5936 | O   | THR | 746 | 55.118 | 0.234  | 32.817 | 1.00 | 34.18 |
| ATOM | 5937 | N   | PHE | 747 | 56.453 | 1.768  | 31.839 | 1.00 | 35.27 |
| ATOM | 5939 | CA  | PHE | 747 | 56.995 | 0.814  | 30.880 | 1.00 | 33.48 |
| ATOM | 5940 | CB  | PHE | 747 | 58.025 | 1.475  | 29.970 | 1.00 | 34.35 |
| ATOM | 5941 | CG  | PHE | 747 | 57.419 | 2.369  | 28.920 | 1.00 | 32.49 |
| ATOM | 5942 | CD1 | PHE | 747 | 56.715 | 1.825  | 27.856 | 1.00 | 30.69 |
| ATOM | 5943 | CD2 | PHE | 747 | 57.519 | 3.749  | 29.018 | 1.00 | 32.81 |
| ATOM | 5944 | CE1 | PHE | 747 | 56.122 | 2.639  | 26.907 | 1.00 | 29.41 |
| ATOM | 5945 | CE2 | PHE | 747 | 56.926 | 4.573  | 28.072 | 1.00 | 32.93 |
| ATOM | 5946 | CZ  | PHE | 747 | 56.223 | 4.014  | 27.015 | 1.00 | 31.50 |
| ATOM | 5947 | C   | PHE | 747 | 57.621 | -0.363 | 31.606 | 1.00 | 34.65 |
| ATOM | 5948 | O   | PHE | 747 | 57.616 | -1.474 | 31.099 | 1.00 | 36.34 |
| ATOM | 5949 | N   | LYS | 748 | 58.142 | -0.128 | 32.808 | 1.00 | 37.75 |
| ATOM | 5951 | CA  | LYS | 748 | 58.748 | -1.205 | 33.583 | 1.00 | 39.67 |
| ATOM | 5952 | CB  | LYS | 748 | 59.382 | -0.664 | 34.873 | 1.00 | 43.06 |
| ATOM | 5953 | CG  | LYS | 748 | 59.958 | -1.757 | 35.774 | 1.00 | 48.96 |
| ATOM | 5954 | CD  | LYS | 748 | 60.750 | -1.207 | 36.966 | 1.00 | 52.20 |
| ATOM | 5955 | CE  | LYS | 748 | 61.183 | -2.344 | 37.907 | 1.00 | 53.62 |
| ATOM | 5956 | NZ  | LYS | 748 | 62.057 | -1.893 | 39.031 | 1.00 | 54.82 |
| ATOM | 5960 | C   | LYS | 748 | 57.680 | -2.263 | 33.882 | 1.00 | 39.65 |
| ATOM | 5961 | O   | LYS | 748 | 57.902 | -3.454 | 33.652 | 1.00 | 38.91 |
| ATOM | 5962 | N   | GLN | 749 | 56.503 | -1.818 | 34.331 | 1.00 | 39.39 |
| ATOM | 5964 | CA  | GLN | 749 | 55.402 | -2.742 | 34.623 | 1.00 | 40.70 |
| ATOM | 5965 | CB  | GLN | 749 | 54.177 | -1.991 | 35.140 | 1.00 | 43.82 |
| ATOM | 5966 | CG  | GLN | 749 | 54.395 | -1.149 | 36.373 | 1.00 | 50.97 |
| ATOM | 5967 | CD  | GLN | 749 | 53.175 | -0.304 | 36.715 | 1.00 | 55.53 |
| ATOM | 5968 | OE1 | GLN | 749 | 53.272 | 0.914  | 36.895 | 1.00 | 55.80 |
| ATOM | 5969 | NE2 | GLN | 749 | 52.012 | -0.940 | 36.773 | 1.00 | 60.05 |
| ATOM | 5972 | C   | GLN | 749 | 55.009 | -3.455 | 33.334 | 1.00 | 40.03 |
| ATOM | 5973 | O   | GLN | 749 | 54.903 | -4.679 | 33.298 | 1.00 | 40.26 |
| ATOM | 5974 | N   | LEU | 750 | 54.802 | -2.666 | 32.278 | 1.00 | 39.18 |
| ATOM | 5976 | CA  | LEU | 750 | 54.400 | -3.171 | 30.964 | 1.00 | 36.65 |
| ATOM | 5977 | CB  | LEU | 750 | 54.369 | -2.039 | 29.927 | 1.00 | 34.58 |
| ATOM | 5978 | CG  | LEU | 750 | 53.355 | -0.910 | 30.116 | 1.00 | 32.52 |
| ATOM | 5979 | CD1 | LEU | 750 | 53.644 | 0.210  | 29.125 | 1.00 | 31.67 |
| ATOM | 5980 | CD2 | LEU | 750 | 51.947 | -1.435 | 29.935 | 1.00 | 31.37 |
| ATOM | 5981 | C   | LEU | 750 | 55.321 | -4.255 | 30.477 | 1.00 | 35.81 |
| ATOM | 5982 | O   | LEU | 750 | 54.856 | -5.267 | 29.963 | 1.00 | 35.81 |
| ATOM | 5983 | N   | VAL | 751 | 56.626 | -4.035 | 30.620 | 1.00 | 37.38 |
| ATOM | 5985 | CA  | VAL | 751 | 57.607 | -5.029 | 30.193 | 1.00 | 38.66 |
| ATOM | 5986 | CB  | VAL | 751 | 59.077 | -4.545 | 30.411 | 1.00 | 35.42 |
| ATOM | 5987 | CG1 | VAL | 751 | 60.075 | -5.646 | 30.041 | 1.00 | 29.83 |
| ATOM | 5988 | CG2 | VAL | 751 | 59.342 | -3.324 | 29.559 | 1.00 | 29.95 |
| ATOM | 5989 | C   | VAL | 751 | 57.337 | -6.314 | 30.974 | 1.00 | 41.63 |
| ATOM | 5990 | O   | VAL | 751 | 57.312 | -7.401 | 30.396 | 1.00 | 42.43 |
| ATOM | 5991 | N   | GLU | 752 | 57.051 | -6.174 | 32.267 | 1.00 | 43.35 |
| ATOM | 5993 | CA  | GLU | 752 | 56.766 | -7.329 | 33.111 | 1.00 | 47.39 |
| ATOM | 5994 | CB  | GLU | 752 | 56.674 | -6.914 | 34.587 | 1.00 | 50.66 |
| ATOM | 5995 | CG  | GLU | 752 | 57.950 | -6.243 | 35.101 | 1.00 | 54.77 |
| ATOM | 5996 | CD  | GLU | 752 | 58.006 | -6.101 | 36.612 | 1.00 | 55.14 |
| ATOM | 5997 | OE1 | GLU | 752 | 58.246 | -4.972 | 37.102 | 1.00 | 54.14 |
| ATOM | 5998 | OE2 | GLU | 752 | 57.844 | -7.131 | 37.308 | 1.00 | 57.73 |
| ATOM | 5999 | C   | GLU | 752 | 55.496 | -8.068 | 32.655 | 1.00 | 46.00 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 6000 | O   | GLU | 752 | 55.548 | -9.261  | 32.328 | 1.00 | 46.25 |
| ATOM | 6001 | N   | ASP | 753 | 54.380 | -7.346  | 32.601 | 1.00 | 44.35 |
| ATOM | 6003 | CA  | ASP | 753 | 53.099 | -7.912  | 32.180 | 1.00 | 44.19 |
| ATOM | 6004 | CB  | ASP | 753 | 52.059 | -6.814  | 31.985 | 1.00 | 46.22 |
| ATOM | 6005 | CG  | ASP | 753 | 51.512 | -6.279  | 33.278 | 1.00 | 50.48 |
| ATOM | 6006 | OD1 | ASP | 753 | 51.396 | -7.062  | 34.248 | 1.00 | 52.15 |
| ATOM | 6007 | OD2 | ASP | 753 | 51.170 | -5.069  | 33.306 | 1.00 | 52.20 |
| ATOM | 6008 | C   | ASP | 753 | 53.244 | -8.608  | 30.849 | 1.00 | 44.54 |
| ATOM | 6009 | O   | ASP | 753 | 52.770 | -9.724  | 30.674 | 1.00 | 46.03 |
| ATOM | 6010 | N   | LEU | 754 | 53.880 | -7.918  | 29.906 | 1.00 | 44.43 |
| ATOM | 6012 | CA  | LEU | 754 | 54.079 | -8.438  | 28.563 | 1.00 | 43.70 |
| ATOM | 6013 | CB  | LEU | 754 | 54.570 | -7.339  | 27.618 | 1.00 | 43.48 |
| ATOM | 6014 | CG  | LEU | 754 | 53.481 | -6.350  | 27.201 | 1.00 | 44.67 |
| ATOM | 6015 | CD1 | LEU | 754 | 54.095 | -5.218  | 26.399 | 1.00 | 44.51 |
| ATOM | 6016 | CD2 | LEU | 754 | 52.384 | -7.069  | 26.408 | 1.00 | 42.07 |
| ATOM | 6017 | C   | LEU | 754 | 54.993 | -9.642  | 28.512 | 1.00 | 43.14 |
| ATOM | 6018 | O   | LEU | 754 | 54.795 | -10.536 | 27.697 | 1.00 | 41.32 |
| ATOM | 6019 | N   | ASP | 755 | 55.990 | -9.671  | 29.383 | 1.00 | 44.74 |
| ATOM | 6021 | CA  | ASP | 755 | 56.897 | -10.800 | 29.426 | 1.00 | 47.24 |
| ATOM | 6022 | CB  | ASP | 755 | 57.942 | -10.575 | 30.517 | 1.00 | 51.26 |
| ATOM | 6023 | CG  | ASP | 755 | 59.121 | -11.518 | 30.407 | 1.00 | 55.39 |
| ATOM | 6024 | OD1 | ASP | 755 | 59.739 | -11.793 | 31.455 | 1.00 | 60.61 |
| ATOM | 6025 | OD2 | ASP | 755 | 59.443 | -11.970 | 29.283 | 1.00 | 57.16 |
| ATOM | 6026 | C   | ASP | 755 | 56.023 | -12.005 | 29.771 | 1.00 | 47.67 |
| ATOM | 6027 | O   | ASP | 755 | 56.041 | -13.032 | 29.081 | 1.00 | 45.99 |
| ATOM | 6028 | N   | ARG | 756 | 55.186 | -11.816 | 30.789 | 1.00 | 46.72 |
| ATOM | 6030 | CA  | ARG | 756 | 54.272 | -12.851 | 31.256 | 1.00 | 46.25 |
| ATOM | 6031 | CB  | ARG | 756 | 53.519 | -12.368 | 32.499 | 1.00 | 46.31 |
| ATOM | 6032 | CG  | ARG | 756 | 52.391 | -13.297 | 32.953 | 1.00 | 46.99 |
| ATOM | 6033 | CD  | ARG | 756 | 51.733 | -12.776 | 34.227 | 1.00 | 48.10 |
| ATOM | 6034 | NE  | ARG | 756 | 51.320 | -11.379 | 34.118 | 1.00 | 53.67 |
| ATOM | 6036 | CZ  | ARG | 756 | 50.294 | -10.951 | 33.385 | 1.00 | 55.35 |
| ATOM | 6037 | NH1 | ARG | 756 | 49.562 | -11.812 | 32.684 | 1.00 | 54.10 |
| ATOM | 6040 | NH2 | ARG | 756 | 50.008 | -9.654  | 33.344 | 1.00 | 56.02 |
| ATOM | 6043 | C   | ARG | 756 | 53.282 | -13.261 | 30.175 | 1.00 | 45.05 |
| ATOM | 6044 | O   | ARG | 756 | 53.213 | -14.429 | 29.806 | 1.00 | 47.19 |
| ATOM | 6045 | N   | ILE | 757 | 52.550 | -12.289 | 29.647 | 1.00 | 43.47 |
| ATOM | 6047 | CA  | ILE | 757 | 51.552 | -12.553 | 28.617 | 1.00 | 43.80 |
| ATOM | 6048 | CB  | ILE | 757 | 50.842 | -11.241 | 28.161 | 1.00 | 42.02 |
| ATOM | 6049 | CG2 | ILE | 757 | 49.811 | -11.536 | 27.086 | 1.00 | 39.63 |
| ATOM | 6050 | CG1 | ILE | 757 | 50.154 | -10.578 | 29.361 | 1.00 | 40.00 |
| ATOM | 6051 | CD1 | ILE | 757 | 49.600 | -9.212  | 29.086 | 1.00 | 42.68 |
| ATOM | 6052 | C   | ILE | 757 | 52.148 | -13.296 | 27.428 | 1.00 | 46.03 |
| ATOM | 6053 | O   | ILE | 757 | 51.549 | -14.250 | 26.947 | 1.00 | 47.78 |
| ATOM | 6054 | N   | VAL | 758 | 53.359 | -12.925 | 27.015 | 1.00 | 49.03 |
| ATOM | 6056 | CA  | VAL | 758 | 54.015 | -13.584 | 25.884 | 1.00 | 51.51 |
| ATOM | 6057 | CB  | VAL | 758 | 55.412 | -12.971 | 25.556 | 1.00 | 50.75 |
| ATOM | 6058 | CG1 | VAL | 758 | 56.105 | -13.780 | 24.470 | 1.00 | 50.31 |
| ATOM | 6059 | CG2 | VAL | 758 | 55.269 | -11.541 | 25.081 | 1.00 | 52.52 |
| ATOM | 6060 | C   | VAL | 758 | 54.209 | -15.050 | 26.212 | 1.00 | 54.30 |
| ATOM | 6061 | O   | VAL | 758 | 53.991 | -15.915 | 25.369 | 1.00 | 54.80 |
| ATOM | 6062 | N   | ALA | 759 | 54.617 | -15.311 | 27.450 | 1.00 | 57.65 |
| ATOM | 6064 | CA  | ALA | 759 | 54.858 | -16.667 | 27.919 | 1.00 | 60.62 |
| ATOM | 6065 | CB  | ALA | 759 | 55.423 | -16.637 | 29.327 | 1.00 | 60.32 |

|      |      |     |      |      |        |         |        |      |       |      |
|------|------|-----|------|------|--------|---------|--------|------|-------|------|
| ATOM | 6066 | C   | ALA  | 759  | 53.571 | -17.478 | 27.889 | 1.00 | 63.25 |      |
| ATOM | 6067 | O   | ALA  | 759  | 53.568 | -18.638 | 27.478 | 1.00 | 65.81 |      |
| ATOM | 6068 | N   | LEU  | 760  | 52.475 | -16.856 | 28.305 | 1.00 | 63.56 |      |
| ATOM | 6070 | CA  | LEU  | 760  | 51.191 | -17.533 | 28.333 | 1.00 | 64.25 |      |
| ATOM | 6071 | CB  | LEU  | 760  | 50.302 | -16.912 | 29.407 | 1.00 | 65.66 |      |
| ATOM | 6072 | CG  | LEU  | 760  | 50.894 | -16.962 | 30.820 | 1.00 | 65.62 |      |
| ATOM | 6073 | CD1 | LEU  | 760  | 49.988 | -16.246 | 31.809 | 1.00 | 64.75 |      |
| ATOM | 6074 | CD2 | LEU  | 760  | 51.109 | -18.410 | 31.227 | 1.00 | 66.65 |      |
| ATOM | 6075 | C   | LEU  | 760  | 50.483 | -17.535 | 26.984 | 1.00 | 64.89 |      |
| ATOM | 6076 | O   | LEU  | 760  | 49.390 | -18.088 | 26.860 | 1.00 | 66.37 |      |
| ATOM | 6077 | N   | THR  | 761  | 51.103 | -16.933 | 25.973 | 1.00 | 65.24 |      |
| ATOM | 6079 | CA  | THR  | 761  | 50.516 | -16.882 | 24.634 | 1.00 | 64.44 |      |
| ATOM | 6080 | CB  | THR  | 761  | 50.829 | -15.539 | 23.925 | 1.00 | 62.95 |      |
| ATOM | 6081 | OG1 | THR  | 761  | 50.247 | -14.463 | 24.669 | 1.00 | 62.70 |      |
| ATOM | 6083 | CG2 | THR  | 761  | 50.249 | -15.525 | 22.521 | 1.00 | 60.59 |      |
| ATOM | 6084 | C   | THR  | 761  | 51.003 | -18.044 | 23.769 | 1.00 | 64.71 |      |
| ATOM | 6085 | O   | THR  | 761  | 52.202 | -18.201 | 23.533 | 1.00 | 64.70 |      |
| ATOM | 6086 | SG  | CYS  | 1603 | 18.536 | -8.818  | 20.295 | 0.50 | 33.97 | PRT2 |
| ATOM | 6087 | CG  | MET  | 534  | 69.178 | 12.159  | 22.968 | 0.50 | 31.30 | PRT2 |
| ATOM | 6088 | SD  | MET  | 534  | 68.892 | 13.138  | 24.442 | 0.50 | 33.06 | PRT2 |
| ATOM | 6089 | CE  | MET  | 534  | 70.060 | 12.456  | 25.568 | 0.50 | 34.22 | PRT2 |
| ATOM | 6090 | SG  | CYS  | 603  | 56.041 | -7.885  | 16.319 | 0.50 | 37.82 | PRT2 |
| ATOM | 2682 | OH2 | TIP3 | 1    | 71.788 | 25.340  | 2.479  | 1.00 | 24.18 |      |
| ATOM | 2685 | OH2 | TIP3 | 2    | 40.022 | 4.089   | 16.127 | 1.00 | 43.09 |      |
| ATOM | 2688 | OH2 | TIP3 | 3    | 83.745 | 19.577  | 10.510 | 1.00 | 27.38 |      |
| ATOM | 2691 | OH2 | TIP3 | 4    | 83.420 | 20.163  | 7.482  | 1.00 | 30.85 |      |
| ATOM | 2694 | OH2 | TIP3 | 5    | 75.022 | 16.439  | 6.505  | 1.00 | 33.15 |      |
| ATOM | 2697 | OH2 | TIP3 | 6    | 86.308 | 19.567  | 9.284  | 1.00 | 33.55 |      |
| ATOM | 2700 | OH2 | TIP3 | 7    | 51.888 | 11.346  | 24.141 | 1.00 | 34.30 |      |
| ATOM | 2703 | OH2 | TIP3 | 8    | 55.125 | 9.616   | 22.499 | 1.00 | 21.44 |      |
| ATOM | 2706 | OH2 | TIP3 | 9    | 57.087 | 4.925   | 32.412 | 1.00 | 28.79 |      |
| ATOM | 2709 | OH2 | TIP3 | 10   | 52.142 | 4.824   | 13.180 | 1.00 | 21.14 |      |
| ATOM | 2712 | OH2 | TIP3 | 11   | 41.312 | 5.600   | 22.910 | 1.00 | 49.23 |      |
| ATOM | 2715 | OH2 | TIP3 | 12   | 45.083 | 9.130   | 21.671 | 1.00 | 37.09 |      |
| ATOM | 2718 | OH2 | TIP3 | 13   | 64.608 | -2.335  | 28.803 | 1.00 | 44.31 |      |
| ATOM | 2721 | OH2 | TIP3 | 14   | 77.192 | 13.199  | 23.753 | 1.00 | 32.96 |      |
| ATOM | 2724 | OH2 | TIP3 | 15   | 79.201 | 17.296  | 17.997 | 1.00 | 38.51 |      |
| ATOM | 2727 | OH2 | TIP3 | 16   | 82.988 | 11.608  | 15.745 | 1.00 | 27.56 |      |
| ATOM | 2730 | OH2 | TIP3 | 17   | 14.096 | -9.819  | 0.333  | 1.00 | 23.53 |      |
| ATOM | 2733 | OH2 | TIP3 | 18   | 38.325 | 0.249   | 5.313  | 1.00 | 43.17 |      |
| ATOM | 2736 | OH2 | TIP3 | 19   | 26.939 | 6.001   | 5.100  | 1.00 | 30.00 |      |
| ATOM | 2739 | OH2 | TIP3 | 20   | 34.305 | -1.615  | 16.952 | 1.00 | 44.82 |      |
| ATOM | 2742 | OH2 | TIP3 | 21   | 20.300 | 2.328   | 27.798 | 1.00 | 45.23 |      |
| ATOM | 2745 | OH2 | TIP3 | 22   | 50.996 | -11.607 | 38.052 | 1.00 | 43.49 |      |
| ATOM | 2748 | OH2 | TIP3 | 23   | 17.261 | -6.167  | -1.444 | 1.00 | 27.13 |      |
| ATOM | 2751 | OH2 | TIP3 | 24   | 27.724 | 8.124   | 14.996 | 1.00 | 31.20 |      |
| ATOM | 2754 | OH2 | TIP3 | 25   | 31.558 | 0.294   | 6.872  | 1.00 | 34.54 |      |
| ATOM | 2757 | OH2 | TIP3 | 26   | 26.907 | -12.815 | 28.161 | 1.00 | 49.20 |      |
| ATOM | 2760 | OH2 | TIP3 | 27   | 28.705 | -17.192 | 13.269 | 1.00 | 30.16 |      |
| ATOM | 2763 | OH2 | TIP3 | 28   | 88.639 | 13.953  | 7.692  | 1.00 | 41.04 |      |
| ATOM | 2766 | OH2 | TIP3 | 29   | -2.328 | -3.576  | 11.086 | 1.00 | 44.89 |      |
| ATOM | 2769 | OH2 | TIP3 | 30   | 34.919 | -4.069  | 19.070 | 1.00 | 53.72 |      |
| ATOM | 2772 | OH2 | TIP3 | 31   | 80.124 | 17.865  | 9.324  | 1.00 | 28.96 |      |
| ATOM | 2775 | OH2 | TIP3 | 32   | 5.417  | 3.492   | 10.771 | 1.00 | 34.07 |      |

|      |      |     |      |    |         |         |        |      |       |
|------|------|-----|------|----|---------|---------|--------|------|-------|
| ATOM | 2778 | OH2 | TIP3 | 33 | -10.718 | 4.889   | 11.542 | 1.00 | 30.81 |
| ATOM | 2781 | OH2 | TIP3 | 34 | 29.486  | -8.823  | 20.599 | 1.00 | 51.35 |
| ATOM | 2784 | OH2 | TIP3 | 35 | 6.151   | 3.065   | 13.821 | 1.00 | 34.56 |
| ATOM | 2787 | OH2 | TIP3 | 36 | 31.907  | 2.919   | 0.361  | 1.00 | 48.13 |
| ATOM | 2790 | OH2 | TIP3 | 37 | 19.974  | 1.928   | -3.873 | 1.00 | 30.12 |
| ATOM | 2793 | OH2 | TIP3 | 38 | 61.976  | 2.660   | 32.604 | 1.00 | 36.01 |
| ATOM | 2796 | OH2 | TIP3 | 39 | 21.084  | -7.119  | -3.759 | 1.00 | 20.12 |
| ATOM | 2799 | OH2 | TIP3 | 40 | -15.729 | 8.693   | 22.468 | 1.00 | 54.88 |
| ATOM | 2802 | OH2 | TIP3 | 41 | 40.160  | 2.461   | 8.734  | 1.00 | 37.95 |
| ATOM | 2805 | OH2 | TIP3 | 42 | 19.248  | 11.349  | 0.190  | 1.00 | 37.63 |
| ATOM | 2808 | OH2 | TIP3 | 43 | 66.856  | 9.143   | 17.185 | 1.00 | 27.91 |
| ATOM | 2811 | OH2 | TIP3 | 44 | 87.262  | 19.150  | 18.734 | 1.00 | 57.83 |
| ATOM | 2814 | OH2 | TIP3 | 45 | 74.597  | 17.144  | 3.987  | 1.00 | 42.19 |
| ATOM | 2817 | OH2 | TIP3 | 46 | 29.192  | 16.988  | 10.582 | 1.00 | 37.28 |
| ATOM | 2820 | OH2 | TIP3 | 47 | 66.415  | 7.073   | 14.829 | 1.00 | 34.86 |
| ATOM | 2823 | OH2 | TIP3 | 48 | 85.063  | 21.453  | 5.510  | 1.00 | 27.42 |
| ATOM | 2826 | OH2 | TIP3 | 49 | -4.716  | 2.835   | 2.998  | 1.00 | 40.54 |
| ATOM | 2829 | OH2 | TIP3 | 50 | 19.369  | 5.069   | 4.888  | 1.00 | 38.40 |
| ATOM | 2832 | OH2 | TIP3 | 51 | 34.750  | 5.517   | 24.999 | 1.00 | 29.11 |
| ATOM | 2835 | OH2 | TIP3 | 52 | 34.740  | -16.765 | 14.093 | 1.00 | 32.68 |
| ATOM | 2838 | OH2 | TIP3 | 53 | 59.994  | 7.555   | 27.844 | 1.00 | 32.60 |
| ATOM | 2841 | OH2 | TIP3 | 54 | -7.401  | -1.595  | 6.080  | 1.00 | 43.73 |
| ATOM | 2844 | OH2 | TIP3 | 55 | 55.257  | 12.084  | 25.108 | 1.00 | 44.32 |
| ATOM | 2847 | OH2 | TIP3 | 56 | 68.239  | 6.953   | 16.647 | 1.00 | 44.46 |
| ATOM | 2850 | OH2 | TIP3 | 57 | 73.621  | 20.852  | 18.820 | 1.00 | 29.47 |
| ATOM | 2853 | OH2 | TIP3 | 58 | 3.399   | -8.294  | -8.210 | 1.00 | 22.31 |
| ATOM | 2856 | OH2 | TIP3 | 59 | 37.999  | 10.824  | 5.505  | 1.00 | 31.62 |
| ATOM | 2859 | OH2 | TIP3 | 60 | 29.779  | -9.515  | -1.395 | 1.00 | 40.76 |
| ATOM | 2862 | OH2 | TIP3 | 61 | 49.114  | 1.432   | 12.261 | 1.00 | 29.92 |
| ATOM | 2865 | OH2 | TIP3 | 62 | 41.257  | 4.012   | 29.005 | 1.00 | 39.24 |
| ATOM | 2868 | OH2 | TIP3 | 63 | 11.113  | -12.848 | 1.296  | 1.00 | 34.36 |
| ATOM | 2871 | OH2 | TIP3 | 64 | -1.221  | -4.593  | 21.504 | 1.00 | 34.24 |
| ATOM | 2874 | OH2 | TIP3 | 65 | 30.002  | 16.453  | 13.258 | 1.00 | 49.66 |
| ATOM | 2877 | OH2 | TIP3 | 66 | 8.212   | 4.106   | 3.434  | 1.00 | 36.54 |
| ATOM | 2880 | OH2 | TIP3 | 67 | 72.868  | 18.807  | 22.589 | 1.00 | 38.26 |
| ATOM | 2883 | OH2 | TIP3 | 68 | -8.056  | -3.666  | 25.021 | 1.00 | 39.81 |
| ATOM | 2886 | OH2 | TIP3 | 69 | 66.436  | -4.683  | 28.008 | 1.00 | 60.97 |
| ATOM | 2889 | OH2 | TIP3 | 70 | 22.063  | -20.641 | 4.804  | 1.00 | 42.25 |
| ATOM | 2892 | OH2 | TIP3 | 71 | 59.860  | -7.407  | 4.859  | 1.00 | 56.78 |
| ATOM | 2895 | OH2 | TIP3 | 72 | 16.887  | -13.832 | -2.611 | 1.00 | 59.32 |
| ATOM | 2898 | OH2 | TIP3 | 73 | -15.108 | 7.351   | 4.303  | 1.00 | 31.87 |
| ATOM | 2901 | OH2 | TIP3 | 74 | 32.901  | 2.922   | 13.663 | 1.00 | 37.89 |
| ATOM | 2904 | OH2 | TIP3 | 75 | 0.173   | -2.666  | 11.035 | 1.00 | 39.12 |
| ATOM | 2907 | OH2 | TIP3 | 76 | 17.533  | 2.317   | 5.808  | 1.00 | 18.66 |
| ATOM | 2910 | OH2 | TIP3 | 77 | 27.183  | 3.730   | 6.349  | 1.00 | 29.04 |
| ATOM | 2913 | OH2 | TIP3 | 78 | -8.812  | 5.887   | 9.703  | 1.00 | 30.53 |
| ATOM | 2916 | OH2 | TIP3 | 79 | 1.614   | -2.195  | 8.694  | 1.00 | 30.79 |
| ATOM | 2919 | OH2 | TIP3 | 80 | -5.304  | -3.157  | 6.846  | 1.00 | 47.38 |
| ATOM | 2922 | OH2 | TIP3 | 81 | 17.401  | 2.918   | 1.973  | 1.00 | 20.47 |
| ATOM | 2925 | OH2 | TIP3 | 82 | 20.333  | 3.188   | 3.159  | 1.00 | 24.44 |
| ATOM | 2928 | OH2 | TIP3 | 83 | 0.408   | -2.516  | 22.276 | 1.00 | 31.11 |
| ATOM | 2931 | OH2 | TIP3 | 84 | 20.095  | -6.123  | -1.372 | 1.00 | 17.62 |
| ATOM | 2934 | OH2 | TIP3 | 85 | 11.018  | -15.627 | 7.421  | 1.00 | 60.29 |
| ATOM | 2937 | OH2 | TIP3 | 86 | 4.089   | -12.037 | 11.797 | 1.00 | 39.47 |

|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 2940 | OH2 | TIP3 | 87  | 6.459   | 0.908   | -3.278 | 1.00 | 30.31 |
| ATOM | 2943 | OH2 | TIP3 | 88  | -13.493 | 1.004   | 5.319  | 1.00 | 41.13 |
| ATOM | 2946 | OH2 | TIP3 | 89  | 15.418  | -7.532  | 0.022  | 1.00 | 21.29 |
| ATOM | 2949 | OH2 | TIP3 | 90  | -2.128  | -5.834  | 4.052  | 1.00 | 57.55 |
| ATOM | 2952 | OH2 | TIP3 | 91  | 12.731  | 4.833   | -4.212 | 1.00 | 44.52 |
| ATOM | 2955 | OH2 | TIP3 | 92  | 69.320  | 27.812  | 2.191  | 1.00 | 37.47 |
| ATOM | 2958 | OH2 | TIP3 | 93  | 24.851  | -12.871 | 0.285  | 1.00 | 44.73 |
| ATOM | 2961 | OH2 | TIP3 | 94  | 60.301  | -4.459  | 33.927 | 1.00 | 40.13 |
| ATOM | 2964 | OH2 | TIP3 | 95  | 10.488  | 5.951   | 3.205  | 1.00 | 41.53 |
| ATOM | 2967 | OH2 | TIP3 | 96  | -9.708  | -4.233  | 4.439  | 1.00 | 29.77 |
| ATOM | 2970 | OH2 | TIP3 | 97  | 72.950  | -1.768  | 10.144 | 1.00 | 39.69 |
| ATOM | 2973 | OH2 | TIP3 | 98  | -3.287  | 5.612   | 30.618 | 1.00 | 34.65 |
| ATOM | 2976 | OH2 | TIP3 | 99  | 36.658  | 1.007   | 11.717 | 1.00 | 35.43 |
| ATOM | 2979 | OH2 | TIP3 | 100 | 21.221  | 6.459   | 16.863 | 1.00 | 20.70 |
| ATOM | 2982 | OH2 | TIP3 | 101 | 5.833   | -8.726  | 22.274 | 1.00 | 47.13 |
| ATOM | 2985 | OH2 | TIP3 | 102 | -13.529 | 7.868   | 17.445 | 1.00 | 31.95 |
| ATOM | 2988 | OH2 | TIP3 | 103 | 26.795  | -10.682 | -0.807 | 1.00 | 28.65 |
| ATOM | 2991 | OH2 | TIP3 | 104 | 23.711  | 1.909   | 18.309 | 1.00 | 28.29 |
| ATOM | 2994 | OH2 | TIP3 | 105 | -2.187  | 12.232  | 3.920  | 1.00 | 44.98 |
| ATOM | 2997 | OH2 | TIP3 | 106 | 59.483  | 12.398  | 33.535 | 1.00 | 39.58 |
| ATOM | 3000 | OH2 | TIP3 | 107 | 4.439   | -10.915 | 1.996  | 1.00 | 43.77 |
| ATOM | 3003 | OH2 | TIP3 | 108 | 8.041   | 2.687   | 6.648  | 1.00 | 45.32 |
| ATOM | 3006 | OH2 | TIP3 | 109 | 75.836  | 1.477   | 25.476 | 1.00 | 41.65 |
| ATOM | 3009 | OH2 | TIP3 | 110 | 48.604  | 15.594  | 14.349 | 1.00 | 36.36 |
| ATOM | 3012 | OH2 | TIP3 | 111 | 2.396   | -11.387 | 9.259  | 1.00 | 34.21 |
| ATOM | 3015 | OH2 | TIP3 | 112 | 82.927  | 26.453  | 12.907 | 1.00 | 36.54 |
| ATOM | 3018 | OH2 | TIP3 | 113 | 8.983   | -6.631  | -3.299 | 1.00 | 47.01 |
| ATOM | 3021 | OH2 | TIP3 | 114 | -8.690  | 4.367   | 4.504  | 1.00 | 41.25 |
| ATOM | 3024 | OH2 | TIP3 | 115 | 7.941   | -13.921 | 8.777  | 1.00 | 36.12 |
| ATOM | 3027 | OH2 | TIP3 | 116 | 51.295  | 6.440   | 10.632 | 1.00 | 28.37 |
| ATOM | 3030 | OH2 | TIP3 | 117 | 20.432  | 3.771   | 15.637 | 1.00 | 31.22 |
| ATOM | 3033 | OH2 | TIP3 | 118 | 72.882  | 3.887   | 20.227 | 1.00 | 30.22 |
| ATOM | 3036 | OH2 | TIP3 | 119 | 5.187   | -11.863 | 22.711 | 1.00 | 47.49 |
| ATOM | 3039 | OH2 | TIP3 | 120 | 33.889  | 2.571   | 16.293 | 1.00 | 40.04 |
| ATOM | 3042 | OH2 | TIP3 | 121 | 9.504   | -12.183 | 7.160  | 1.00 | 31.48 |
| ATOM | 3045 | OH2 | TIP3 | 122 | 8.397   | 3.827   | -1.647 | 1.00 | 46.92 |
| ATOM | 3048 | OH2 | TIP3 | 123 | 7.281   | 7.321   | 2.391  | 1.00 | 62.46 |
| ATOM | 3051 | OH2 | TIP3 | 124 | 35.682  | -1.725  | 0.534  | 1.00 | 36.75 |
| ATOM | 3054 | OH2 | TIP3 | 125 | 44.465  | 10.095  | 11.089 | 1.00 | 44.72 |
| ATOM | 3057 | OH2 | TIP3 | 126 | 45.247  | 11.893  | 21.405 | 1.00 | 33.51 |
| ATOM | 3060 | OH2 | TIP3 | 127 | 57.386  | -10.506 | 14.020 | 1.00 | 45.72 |
| ATOM | 3063 | OH2 | TIP3 | 128 | -3.033  | 15.103  | 16.644 | 1.00 | 38.48 |
| ATOM | 3066 | OH2 | TIP3 | 129 | 85.621  | 11.111  | 8.814  | 1.00 | 38.13 |
| ATOM | 3069 | OH2 | TIP3 | 130 | 13.040  | -2.760  | 2.176  | 1.00 | 31.26 |
| ATOM | 3072 | OH2 | TIP3 | 131 | 75.607  | 3.932   | 20.836 | 1.00 | 55.09 |
| ATOM | 3075 | OH2 | TIP3 | 132 | 13.080  | 7.467   | -2.358 | 1.00 | 35.05 |
| ATOM | 3078 | OH2 | TIP3 | 133 | 11.308  | -9.967  | 0.995  | 1.00 | 28.96 |
| ATOM | 3081 | OH2 | TIP3 | 134 | 13.716  | -16.170 | 3.848  | 1.00 | 44.64 |
| ATOM | 3084 | OH2 | TIP3 | 135 | -6.498  | -3.706  | 16.178 | 1.00 | 43.17 |
| ATOM | 3087 | OH2 | TIP3 | 136 | 25.841  | -12.949 | 3.950  | 1.00 | 41.14 |
| ATOM | 3090 | OH2 | TIP3 | 137 | -16.285 | 10.803  | 6.585  | 1.00 | 45.75 |
| ATOM | 3093 | OH2 | TIP3 | 138 | 86.457  | 12.585  | 6.477  | 1.00 | 36.37 |
| ATOM | 3096 | OH2 | TIP3 | 139 | 32.097  | -4.644  | 2.224  | 1.00 | 28.35 |
| ATOM | 3099 | OH2 | TIP3 | 140 | 44.936  | 7.528   | 11.961 | 1.00 | 46.60 |

|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 3102 | OH2 | TIP3 | 141 | 80.781  | 12.162  | 16.353 | 1.00 | 41.46 |
| ATOM | 3105 | OH2 | TIP3 | 142 | 2.547   | -7.532  | -1.453 | 1.00 | 41.42 |
| ATOM | 3108 | OH2 | TIP3 | 143 | 31.850  | -5.907  | 21.194 | 1.00 | 54.70 |
| ATOM | 3111 | OH2 | TIP3 | 144 | 74.524  | -2.663  | 12.264 | 1.00 | 40.35 |
| ATOM | 3114 | OH2 | TIP3 | 145 | 7.592   | 6.769   | -0.931 | 1.00 | 58.34 |
| ATOM | 3117 | OH2 | TIP3 | 146 | 71.168  | 5.735   | 21.648 | 1.00 | 27.86 |
| ATOM | 3120 | OH2 | TIP3 | 147 | 67.876  | -4.900  | 8.725  | 1.00 | 33.58 |
| ATOM | 3123 | OH2 | TIP3 | 148 | 0.554   | -10.181 | 6.605  | 1.00 | 75.65 |
| ATOM | 3126 | OH2 | TIP3 | 149 | 67.965  | 18.266  | 10.874 | 1.00 | 30.42 |
| ATOM | 3129 | OH2 | TIP3 | 150 | 3.509   | 8.125   | 4.021  | 1.00 | 40.77 |
| ATOM | 3132 | OH2 | TIP3 | 151 | 52.216  | 12.175  | 18.131 | 1.00 | 47.63 |
| ATOM | 3135 | OH2 | TIP3 | 152 | -10.336 | 6.394   | 5.014  | 1.00 | 48.53 |
| ATOM | 3138 | OH2 | TIP3 | 153 | 76.427  | 1.384   | -1.196 | 1.00 | 47.21 |
| ATOM | 3141 | OH2 | TIP3 | 154 | 10.116  | -12.199 | 17.089 | 1.00 | 70.16 |
| ATOM | 3144 | OH2 | TIP3 | 155 | 34.043  | 14.595  | 18.314 | 1.00 | 40.56 |
| ATOM | 3147 | OH2 | TIP3 | 156 | 2.488   | -8.304  | 16.835 | 1.00 | 64.47 |
| ATOM | 3150 | OH2 | TIP3 | 157 | 29.610  | 1.954   | 6.685  | 1.00 | 48.74 |
| ATOM | 3153 | OH2 | TIP3 | 158 | 32.578  | -17.270 | 12.109 | 1.00 | 37.35 |
| ATOM | 3156 | OH2 | TIP3 | 159 | 42.013  | 18.106  | 11.196 | 1.00 | 68.33 |
| ATOM | 3159 | OH2 | TIP3 | 160 | 87.646  | 10.346  | 5.465  | 1.00 | 75.39 |
| ATOM | 3162 | OH2 | TIP3 | 161 | 69.931  | -3.739  | 24.921 | 1.00 | 70.42 |
| ATOM | 3165 | OH2 | TIP3 | 162 | 77.277  | 5.700   | 23.531 | 1.00 | 53.26 |
| ATOM | 3168 | OH2 | TIP3 | 163 | 34.172  | 15.704  | 1.865  | 1.00 | 44.88 |
| ATOM | 3171 | OH2 | TIP3 | 164 | -9.871  | 7.514   | 7.751  | 1.00 | 39.18 |
| ATOM | 3174 | OH2 | TIP3 | 165 | 11.814  | 5.604   | 7.443  | 1.00 | 46.70 |
| ATOM | 3177 | OH2 | TIP3 | 166 | -8.801  | 13.912  | 13.532 | 1.00 | 52.89 |
| ATOM | 3180 | OH2 | TIP3 | 167 | 32.195  | 3.409   | 18.336 | 1.00 | 32.33 |
| ATOM | 3183 | OH2 | TIP3 | 168 | -8.858  | 9.696   | 24.279 | 1.00 | 38.90 |
| ATOM | 3186 | OH2 | TIP3 | 169 | -1.135  | -6.924  | 15.691 | 1.00 | 43.05 |
| ATOM | 3189 | OH2 | TIP3 | 170 | 79.806  | 0.323   | 15.371 | 1.00 | 36.91 |
| ATOM | 3192 | OH2 | TIP3 | 171 | 67.181  | 20.622  | -1.545 | 1.00 | 44.72 |
| ATOM | 3195 | OH2 | TIP3 | 172 | -0.823  | 3.732   | 1.065  | 1.00 | 52.11 |
| ATOM | 3198 | OH2 | TIP3 | 173 | -0.130  | 6.021   | 2.491  | 1.00 | 40.87 |
| ATOM | 3201 | OH2 | TIP3 | 174 | -1.027  | 8.941   | 1.064  | 1.00 | 60.72 |
| ATOM | 3204 | OH2 | TIP3 | 175 | -5.566  | 8.867   | 2.163  | 1.00 | 47.25 |
| ATOM | 3207 | OH2 | TIP3 | 176 | -7.259  | 10.294  | 4.033  | 1.00 | 53.61 |
| ATOM | 3210 | OH2 | TIP3 | 177 | 2.664   | 7.247   | 1.058  | 1.00 | 46.41 |
| ATOM | 3213 | OH2 | TIP3 | 178 | 5.295   | 10.728  | 8.257  | 1.00 | 39.84 |
| ATOM | 3216 | OH2 | TIP3 | 179 | 63.743  | 12.726  | 22.713 | 1.00 | 49.55 |
| ATOM | 3219 | OH2 | TIP3 | 180 | 79.165  | 1.016   | 17.948 | 1.00 | 51.41 |
| ATOM | 3222 | OH2 | TIP3 | 181 | 13.823  | -1.538  | -3.942 | 1.00 | 39.85 |
| ATOM | 3225 | OH2 | TIP3 | 182 | 59.255  | 3.213   | 32.873 | 1.00 | 76.77 |
| ATOM | 3228 | OH2 | TIP3 | 183 | 32.210  | 13.612  | 20.027 | 1.00 | 60.41 |
| ATOM | 3231 | OH2 | TIP3 | 184 | 72.606  | 16.267  | 22.574 | 1.00 | 60.78 |
| ATOM | 3234 | OH2 | TIP3 | 185 | -0.147  | 5.713   | 30.877 | 1.00 | 50.19 |
| ATOM | 3237 | OH2 | TIP3 | 186 | -1.207  | -4.507  | 27.969 | 1.00 | 65.19 |
| ATOM | 3240 | OH2 | TIP3 | 187 | 81.340  | 15.584  | 16.808 | 1.00 | 64.48 |
| ATOM | 3243 | OH2 | TIP3 | 188 | -17.535 | 3.884   | 23.785 | 1.00 | 57.17 |
| ATOM | 3246 | OH2 | TIP3 | 189 | 27.503  | 10.697  | 14.669 | 1.00 | 36.11 |
| ATOM | 3249 | OH2 | TIP3 | 190 | 34.585  | 4.535   | 27.618 | 1.00 | 61.68 |
| ATOM | 3252 | OH2 | TIP3 | 191 | -3.701  | -4.982  | 9.069  | 1.00 | 43.66 |
| ATOM | 3255 | OH2 | TIP3 | 192 | 42.524  | 7.811   | 22.390 | 1.00 | 34.53 |
| ATOM | 3258 | OH2 | TIP3 | 193 | 52.937  | 11.764  | 21.790 | 1.00 | 36.19 |
| ATOM | 3261 | OH2 | TIP3 | 194 | -7.665  | 8.600   | 6.358  | 1.00 | 59.08 |

|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 3264 | OH2 | TIP3 | 195 | 86.880  | 5.187   | 16.579 | 1.00 | 55.88 |
| ATOM | 3267 | OH2 | TIP3 | 196 | 55.377  | 16.147  | 20.540 | 1.00 | 48.25 |
| ATOM | 3270 | OH2 | TIP3 | 197 | 51.394  | 19.664  | 22.988 | 1.00 | 46.81 |
| ATOM | 3273 | OH2 | TIP3 | 198 | 20.021  | 7.087   | 7.226  | 1.00 | 52.98 |
| ATOM | 3276 | OH2 | TIP3 | 199 | 28.959  | 1.819   | -3.219 | 1.00 | 40.50 |
| ATOM | 3279 | OH2 | TIP3 | 200 | 26.533  | 2.812   | -4.295 | 1.00 | 54.24 |
| ATOM | 3282 | OH2 | TIP3 | 201 | 36.739  | 3.003   | 18.397 | 1.00 | 42.13 |
| ATOM | 3285 | OH2 | TIP3 | 202 | 16.968  | -20.752 | 14.318 | 1.00 | 54.54 |
| ATOM | 3288 | OH2 | TIP3 | 203 | 28.177  | -14.418 | 6.134  | 1.00 | 61.36 |
| ATOM | 3291 | OH2 | TIP3 | 204 | 31.488  | 1.501   | -1.796 | 1.00 | 47.49 |
| ATOM | 3294 | OH2 | TIP3 | 205 | 10.665  | -16.494 | 15.731 | 1.00 | 41.42 |
| ATOM | 3297 | OH2 | TIP3 | 206 | 6.916   | -12.200 | 6.160  | 1.00 | 61.94 |
| ATOM | 3300 | OH2 | TIP3 | 207 | -12.659 | 14.357  | 10.908 | 1.00 | 52.96 |
| ATOM | 3303 | OH2 | TIP3 | 208 | 11.274  | 9.662   | -1.588 | 1.00 | 48.45 |
| ATOM | 3306 | OH2 | TIP3 | 209 | 11.491  | 12.484  | -1.531 | 1.00 | 44.51 |
| ATOM | 3309 | OH2 | TIP3 | 210 | 34.037  | 13.520  | -1.011 | 1.00 | 48.43 |
| ATOM | 3312 | OH2 | TIP3 | 211 | 31.162  | 18.259  | 7.980  | 1.00 | 44.86 |
| ATOM | 3315 | OH2 | TIP3 | 212 | 36.937  | 11.633  | -1.971 | 1.00 | 49.85 |
| ATOM | 3318 | OH2 | TIP3 | 213 | 64.024  | 13.599  | 26.505 | 1.00 | 37.53 |
| ATOM | 3321 | OH2 | TIP3 | 214 | 36.528  | 5.933   | 14.857 | 1.00 | 57.04 |
| ATOM | 3324 | OH2 | TIP3 | 215 | 90.599  | 4.042   | 6.342  | 1.00 | 54.08 |
| ATOM | 3327 | OH2 | TIP3 | 216 | 50.139  | -11.645 | 10.526 | 1.00 | 54.64 |
| ATOM | 3330 | OH2 | TIP3 | 217 | 66.523  | -1.024  | 30.536 | 1.00 | 39.41 |
| ATOM | 3333 | OH2 | TIP3 | 218 | 74.880  | 18.976  | 20.591 | 1.00 | 41.84 |
| ATOM | 3336 | OH2 | TIP3 | 219 | -3.095  | 9.744   | 3.142  | 1.00 | 52.35 |
| ATOM | 3339 | OH2 | TIP3 | 220 | 5.601   | -3.682  | 25.022 | 1.00 | 29.30 |
| ATOM | 3342 | OH2 | TIP3 | 221 | 35.616  | 6.407   | 12.455 | 1.00 | 44.48 |
| ATOM | 3345 | OH2 | TIP3 | 222 | -5.381  | 16.006  | 14.081 | 1.00 | 44.23 |
| ATOM | 3348 | OH2 | TIP3 | 223 | 46.509  | -11.503 | 26.814 | 1.00 | 53.82 |
| ATOM | 3351 | OH2 | TIP3 | 224 | -3.791  | -5.481  | 20.929 | 1.00 | 61.42 |
| ATOM | 3354 | OH2 | TIP3 | 225 | 1.622   | -3.876  | -0.402 | 1.00 | 58.60 |
| ATOM | 3357 | OH2 | TIP3 | 226 | 86.244  | 11.220  | 23.133 | 1.00 | 59.84 |
| ATOM | 3360 | OH2 | TIP3 | 227 | 11.011  | 7.959   | 5.659  | 1.00 | 63.07 |
| ATOM | 3363 | OH2 | TIP3 | 228 | 64.610  | -8.031  | 20.406 | 1.00 | 48.11 |
| ATOM | 3366 | OH2 | TIP3 | 229 | 11.446  | -17.829 | 13.438 | 1.00 | 51.35 |
| ATOM | 3369 | OH2 | TIP3 | 230 | 72.056  | 1.258   | -1.830 | 1.00 | 43.88 |
| ATOM | 3372 | OH2 | TIP3 | 231 | 57.359  | 9.732   | 11.744 | 1.00 | 65.45 |
| ATOM | 3375 | OH2 | TIP3 | 232 | 43.344  | 20.728  | 30.066 | 1.00 | 61.52 |
| ATOM | 3378 | OH2 | TIP3 | 233 | 66.723  | 16.772  | 15.661 | 1.00 | 43.79 |
| ATOM | 3381 | OH2 | TIP3 | 234 | 88.036  | 22.036  | 4.257  | 1.00 | 61.83 |
| ATOM | 3384 | OH2 | TIP3 | 235 | 12.085  | 2.346   | 27.862 | 1.00 | 46.29 |
| ATOM | 3387 | OH2 | TIP3 | 236 | 64.898  | -0.425  | 3.209  | 1.00 | 50.06 |
| ATOM | 3390 | OH2 | TIP3 | 237 | 72.114  | 28.348  | 7.731  | 1.00 | 53.01 |
| ATOM | 3393 | OH2 | TIP3 | 238 | 25.792  | -8.081  | 27.181 | 1.00 | 55.19 |
| ATOM | 3396 | OH2 | TIP3 | 239 | -18.262 | 10.614  | 12.607 | 1.00 | 51.54 |
| ATOM | 3399 | OH2 | TIP3 | 240 | 30.336  | 11.280  | 16.201 | 1.00 | 46.53 |
| ATOM | 3402 | OH2 | TIP3 | 241 | 22.712  | -15.818 | -2.226 | 1.00 | 47.29 |
| ATOM | 3405 | OH2 | TIP3 | 242 | 29.700  | 9.496   | 18.074 | 1.00 | 40.10 |
| ATOM | 3408 | OH2 | TIP3 | 243 | 63.297  | -0.480  | 5.497  | 1.00 | 49.90 |
| ATOM | 3411 | OH2 | TIP3 | 244 | 61.458  | 7.093   | 11.497 | 1.00 | 45.71 |
| ATOM | 3414 | OH2 | TIP3 | 245 | -0.217  | 2.232   | 32.172 | 1.00 | 46.12 |
| ATOM | 3417 | OH2 | TIP3 | 246 | 66.196  | 6.250   | 12.159 | 1.00 | 34.47 |



TABLE 3

| Atom<br>No. | Atom<br>Type | A.A<br>Type | A.A<br>No. | X    | Y       | Z      | OCC    | B          |
|-------------|--------------|-------------|------------|------|---------|--------|--------|------------|
| ATOM        | 1            | N           | GLU        | 1464 | -13.712 | 16.996 | 8.424  | 1.00 61.15 |
| ATOM        | 3            | CA          | GLU        | 1464 | -12.478 | 17.133 | 7.646  | 1.00 60.03 |
| ATOM        | 4            | CB          | GLU        | 1464 | -11.465 | 18.020 | 8.378  | 1.00 62.43 |
| ATOM        | 5            | C           | GLU        | 1464 | -11.865 | 15.766 | 7.319  | 1.00 57.36 |
| ATOM        | 6            | O           | GLU        | 1464 | -11.765 | 15.402 | 6.145  | 1.00 60.80 |
| ATOM        | 7            | N           | LEU        | 1465 | -11.466 | 15.003 | 8.333  | 1.00 50.25 |
| ATOM        | 9            | CA          | LEU        | 1465 | -10.899 | 13.691 | 8.067  | 1.00 42.73 |
| ATOM        | 10           | CB          | LEU        | 1465 | -10.097 | 13.171 | 9.258  | 1.00 41.34 |
| ATOM        | 11           | CG          | LEU        | 1465 | -8.571  | 13.277 | 9.169  | 1.00 39.78 |
| ATOM        | 12           | CD1         | LEU        | 1465 | -8.175  | 14.728 | 8.977  | 1.00 45.14 |
| ATOM        | 13           | CD2         | LEU        | 1465 | -7.926  | 12.722 | 10.426 | 1.00 34.20 |
| ATOM        | 14           | C           | LEU        | 1465 | -12.009 | 12.706 | 7.748  | 1.00 39.42 |
| ATOM        | 15           | O           | LEU        | 1465 | -13.070 | 12.719 | 8.375  | 1.00 36.63 |
| ATOM        | 16           | N           | PRO        | 1466 | -11.821 | 11.919 | 6.682  | 1.00 38.54 |
| ATOM        | 17           | CD          | PRO        | 1466 | -10.682 | 12.019 | 5.751  | 1.00 37.04 |
| ATOM        | 18           | CA          | PRO        | 1466 | -12.781 | 10.902 | 6.232  | 1.00 38.75 |
| ATOM        | 19           | CB          | PRO        | 1466 | -12.176 | 10.426 | 4.910  | 1.00 39.49 |
| ATOM        | 20           | CG          | PRO        | 1466 | -10.681 | 10.667 | 5.109  | 1.00 40.64 |
| ATOM        | 21           | C           | PRO        | 1466 | -12.859 | 9.756  | 7.246  | 1.00 39.08 |
| ATOM        | 22           | O           | PRO        | 1466 | -11.834 | 9.283  | 7.748  | 1.00 41.23 |
| ATOM        | 23           | N           | GLU        | 1467 | -14.064 | 9.278  | 7.513  | 1.00 37.11 |
| ATOM        | 25           | CA          | GLU        | 1467 | -14.247 | 8.213  | 8.482  | 1.00 35.96 |
| ATOM        | 26           | CB          | GLU        | 1467 | -15.725 | 8.123  | 8.863  | 1.00 39.90 |
| ATOM        | 27           | CG          | GLU        | 1467 | -16.334 | 9.410  | 9.417  | 1.00 46.64 |
| ATOM        | 28           | CD          | GLU        | 1467 | -17.823 | 9.280  | 9.694  | 1.00 51.50 |
| ATOM        | 29           | OE1         | GLU        | 1467 | -18.294 | 8.135  | 9.854  | 1.00 54.17 |
| ATOM        | 30           | OE2         | GLU        | 1467 | -18.529 | 10.315 | 9.756  | 1.00 53.39 |
| ATOM        | 31           | C           | GLU        | 1467 | -13.794 | 6.865  | 7.939  | 1.00 33.77 |
| ATOM        | 32           | O           | GLU        | 1467 | -13.885 | 6.632  | 6.740  | 1.00 36.27 |
| ATOM        | 33           | N           | ASP        | 1468 | -13.291 | 5.991  | 8.813  | 1.00 29.80 |
| ATOM        | 35           | CA          | ASP        | 1468 | -12.869 | 4.649  | 8.409  | 1.00 28.19 |
| ATOM        | 36           | CB          | ASP        | 1468 | -11.362 | 4.567  | 8.120  | 1.00 27.83 |
| ATOM        | 37           | CG          | ASP        | 1468 | -10.942 | 3.223  | 7.507  | 1.00 27.78 |
| ATOM        | 38           | OD1         | ASP        | 1468 | -11.689 | 2.225  | 7.592  | 1.00 25.64 |
| ATOM        | 39           | OD2         | ASP        | 1468 | -9.836  | 3.165  | 6.935  | 1.00 27.59 |
| ATOM        | 40           | C           | ASP        | 1468 | -13.244 | 3.672  | 9.512  | 1.00 28.05 |
| ATOM        | 41           | O           | ASP        | 1468 | -12.462 | 3.404  | 10.437 | 1.00 25.89 |
| ATOM        | 42           | N           | PRO        | 1469 | -14.446 | 3.089  | 9.403  | 1.00 29.07 |
| ATOM        | 43           | CD          | PRO        | 1469 | -15.401 | 3.311  | 8.298  | 1.00 29.93 |
| ATOM        | 44           | CA          | PRO        | 1469 | -14.981 | 2.124  | 10.365 | 1.00 28.65 |
| ATOM        | 45           | CB          | PRO        | 1469 | -16.235 | 1.615  | 9.659  | 1.00 30.89 |
| ATOM        | 46           | CG          | PRO        | 1469 | -16.690 | 2.811  | 8.879  | 1.00 28.99 |
| ATOM        | 47           | C           | PRO        | 1469 | -14.029 | 0.974  | 10.687 | 1.00 27.63 |
| ATOM        | 48           | O           | PRO        | 1469 | -14.136 | 0.364  | 11.748 | 1.00 26.94 |
| ATOM        | 49           | N           | ARG        | 1470 | -13.128 | 0.666  | 9.758  | 1.00 26.37 |
| ATOM        | 51           | CA          | ARG        | 1470 | -12.161 | -0.414 | 9.947  | 1.00 26.64 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 52  | CB  | ARG | 1470 | -11.363 | -0.661 | 8.666  | 1.00 | 27.12 |
| ATOM | 53  | CG  | ARG | 1470 | -12.150 | -1.014 | 7.424  | 1.00 | 29.72 |
| ATOM | 54  | CD  | ARG | 1470 | -11.189 | -1.184 | 6.236  | 1.00 | 30.37 |
| ATOM | 55  | NE  | ARG | 1470 | -10.450 | 0.044  | 5.971  | 1.00 | 32.56 |
| ATOM | 57  | CZ  | ARG | 1470 | -9.624  | 0.211  | 4.948  | 1.00 | 37.69 |
| ATOM | 58  | NH1 | ARG | 1470 | -9.428  | -0.784 | 4.091  | 1.00 | 44.25 |
| ATOM | 61  | NH2 | ARG | 1470 | -8.997  | 1.370  | 4.778  | 1.00 | 34.12 |
| ATOM | 64  | C   | ARG | 1470 | -11.129 | -0.176 | 11.051 | 1.00 | 27.58 |
| ATOM | 65  | O   | ARG | 1470 | -10.504 | -1.123 | 11.522 | 1.00 | 28.12 |
| ATOM | 66  | N   | TRP | 1471 | -10.900 | 1.079  | 11.421 | 1.00 | 27.62 |
| ATOM | 68  | CA  | TRP | 1471 | -9.870  | 1.362  | 12.408 | 1.00 | 26.66 |
| ATOM | 69  | CB  | TRP | 1471 | -8.661  | 1.938  | 11.686 | 1.00 | 24.95 |
| ATOM | 70  | CG  | TRP | 1471 | -8.010  | 0.951  | 10.790 | 1.00 | 25.65 |
| ATOM | 71  | CD2 | TRP | 1471 | -7.100  | -0.083 | 11.186 | 1.00 | 23.19 |
| ATOM | 72  | CE2 | TRP | 1471 | -6.734  | -0.776 | 10.022 | 1.00 | 21.80 |
| ATOM | 73  | CE3 | TRP | 1471 | -6.567  | -0.489 | 12.414 | 1.00 | 21.84 |
| ATOM | 74  | CD1 | TRP | 1471 | -8.155  | 0.843  | 9.435  | 1.00 | 23.15 |
| ATOM | 75  | NE1 | TRP | 1471 | -7.388  | -0.192 | 8.970  | 1.00 | 23.32 |
| ATOM | 77  | CZ2 | TRP | 1471 | -5.855  | -1.857 | 10.052 | 1.00 | 22.54 |
| ATOM | 78  | CZ3 | TRP | 1471 | -5.698  | -1.564 | 12.439 | 1.00 | 21.72 |
| ATOM | 79  | CH2 | TRP | 1471 | -5.352  | -2.235 | 11.269 | 1.00 | 21.90 |
| ATOM | 80  | C   | TRP | 1471 | -10.224 | 2.278  | 13.558 | 1.00 | 28.44 |
| ATOM | 81  | O   | TRP | 1471 | -9.497  | 2.334  | 14.546 | 1.00 | 29.29 |
| ATOM | 82  | N   | GLU | 1472 | -11.317 | 3.015  | 13.424 | 1.00 | 29.49 |
| ATOM | 84  | CA  | GLU | 1472 | -11.719 | 3.962  | 14.453 | 1.00 | 29.97 |
| ATOM | 85  | CB  | GLU | 1472 | -12.920 | 4.769  | 13.961 | 1.00 | 33.30 |
| ATOM | 86  | CG  | GLU | 1472 | -13.218 | 6.050  | 14.731 | 1.00 | 33.27 |
| ATOM | 87  | CD  | GLU | 1472 | -12.475 | 7.249  | 14.195 | 1.00 | 34.26 |
| ATOM | 88  | OE1 | GLU | 1472 | -11.970 | 7.191  | 13.055 | 1.00 | 38.00 |
| ATOM | 89  | OE2 | GLU | 1472 | -12.413 | 8.265  | 14.910 | 1.00 | 34.01 |
| ATOM | 90  | C   | GLU | 1472 | -12.034 | 3.366  | 15.826 | 1.00 | 27.30 |
| ATOM | 91  | O   | GLU | 1472 | -12.640 | 2.309  | 15.945 | 1.00 | 28.36 |
| ATOM | 92  | N   | LEU | 1473 | -11.619 | 4.069  | 16.866 | 1.00 | 25.91 |
| ATOM | 94  | CA  | LEU | 1473 | -11.896 | 3.652  | 18.229 | 1.00 | 24.89 |
| ATOM | 95  | CB  | LEU | 1473 | -10.625 | 3.210  | 18.948 | 1.00 | 24.70 |
| ATOM | 96  | CG  | LEU | 1473 | -10.766 | 2.923  | 20.454 | 1.00 | 24.56 |
| ATOM | 97  | CD1 | LEU | 1473 | -11.498 | 1.613  | 20.701 | 1.00 | 21.89 |
| ATOM | 98  | CD2 | LEU | 1473 | -9.385  | 2.872  | 21.095 | 1.00 | 23.90 |
| ATOM | 99  | C   | LEU | 1473 | -12.426 | 4.907  | 18.882 | 1.00 | 27.05 |
| ATOM | 100 | O   | LEU | 1473 | -11.968 | 6.016  | 18.567 | 1.00 | 25.17 |
| ATOM | 101 | N   | PRO | 1474 | -13.479 | 4.766  | 19.706 | 1.00 | 28.20 |
| ATOM | 102 | CD  | PRO | 1474 | -14.290 | 3.551  | 19.886 | 1.00 | 29.92 |
| ATOM | 103 | CA  | PRO | 1474 | -14.088 | 5.897  | 20.411 | 1.00 | 30.61 |
| ATOM | 104 | CB  | PRO | 1474 | -15.197 | 5.224  | 21.226 | 1.00 | 28.15 |
| ATOM | 105 | CG  | PRO | 1474 | -15.613 | 4.110  | 20.357 | 1.00 | 24.28 |
| ATOM | 106 | C   | PRO | 1474 | -13.036 | 6.545  | 21.312 | 1.00 | 32.98 |
| ATOM | 107 | O   | PRO | 1474 | -12.253 | 5.838  | 21.968 | 1.00 | 34.79 |
| ATOM | 108 | N   | ARG | 1475 | -13.035 | 7.875  | 21.366 | 1.00 | 32.75 |
| ATOM | 110 | CA  | ARG | 1475 | -12.060 | 8.606  | 22.168 | 1.00 | 34.22 |
| ATOM | 111 | CB  | ARG | 1475 | -12.250 | 10.116 | 21.997 | 1.00 | 34.21 |
| ATOM | 112 | CG  | ARG | 1475 | -12.153 | 10.549 | 20.559 | 1.00 | 42.48 |
| ATOM | 113 | CD  | ARG | 1475 | -11.956 | 12.056 | 20.364 | 1.00 | 45.16 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 114 | NE  | ARG | 1475 | -11.655 | 12.317 | 18.954 | 1.00 | 45.65 |
| ATOM | 116 | CZ  | ARG | 1475 | -10.447 | 12.599 | 18.484 | 1.00 | 41.31 |
| ATOM | 117 | NH1 | ARG | 1475 | -9.420  | 12.686 | 19.318 | 1.00 | 35.94 |
| ATOM | 120 | NH2 | ARG | 1475 | -10.253 | 12.673 | 17.172 | 1.00 | 42.37 |
| ATOM | 123 | C   | ARG | 1475 | -12.114 | 8.232  | 23.641 | 1.00 | 35.29 |
| ATOM | 124 | O   | ARG | 1475 | -11.094 | 8.178  | 24.318 | 1.00 | 37.28 |
| ATOM | 125 | N   | ASP | 1476 | -13.304 | 7.931  | 24.129 | 1.00 | 35.37 |
| ATOM | 127 | CA  | ASP | 1476 | -13.468 | 7.570  | 25.526 | 1.00 | 36.97 |
| ATOM | 128 | CB  | ASP | 1476 | -14.952 | 7.586  | 25.896 | 1.00 | 39.47 |
| ATOM | 129 | CG  | ASP | 1476 | -15.748 | 6.501  | 25.205 | 1.00 | 40.02 |
| ATOM | 130 | OD1 | ASP | 1476 | -15.221 | 5.809  | 24.320 | 1.00 | 41.08 |
| ATOM | 131 | OD2 | ASP | 1476 | -16.926 | 6.327  | 25.571 | 1.00 | 47.00 |
| ATOM | 132 | C   | ASP | 1476 | -12.850 | 6.225  | 25.894 | 1.00 | 36.07 |
| ATOM | 133 | O   | ASP | 1476 | -12.830 | 5.842  | 27.066 | 1.00 | 36.26 |
| ATOM | 134 | N   | ARG | 1477 | -12.382 | 5.495  | 24.868 | 1.00 | 36.94 |
| ATOM | 136 | CA  | ARG | 1477 | -11.766 | 4.189  | 25.104 | 1.00 | 35.22 |
| ATOM | 137 | CB  | ARG | 1477 | -12.081 | 3.268  | 23.925 | 1.00 | 34.29 |
| ATOM | 138 | CG  | ARG | 1477 | -13.546 | 3.056  | 23.675 | 1.00 | 32.23 |
| ATOM | 139 | CD  | ARG | 1477 | -14.206 | 2.434  | 24.879 | 1.00 | 30.56 |
| ATOM | 140 | NE  | ARG | 1477 | -14.426 | 3.419  | 25.925 | 1.00 | 31.86 |
| ATOM | 142 | CZ  | ARG | 1477 | -14.730 | 3.126  | 27.182 | 1.00 | 33.09 |
| ATOM | 143 | NH1 | ARG | 1477 | -14.855 | 1.858  | 27.563 | 1.00 | 35.00 |
| ATOM | 146 | NH2 | ARG | 1477 | -14.904 | 4.101  | 28.053 | 1.00 | 29.62 |
| ATOM | 149 | C   | ARG | 1477 | -10.262 | 4.270  | 25.271 | 1.00 | 35.51 |
| ATOM | 150 | O   | ARG | 1477 | -9.621  | 3.290  | 25.637 | 1.00 | 36.44 |
| ATOM | 151 | N   | LEU | 1478 | -9.704  | 5.444  | 25.023 | 1.00 | 34.59 |
| ATOM | 153 | CA  | LEU | 1478 | -8.270  | 5.630  | 25.129 | 1.00 | 36.35 |
| ATOM | 154 | CB  | LEU | 1478 | -7.750  | 6.254  | 23.840 | 1.00 | 36.41 |
| ATOM | 155 | CG  | LEU | 1478 | -6.250  | 6.185  | 23.556 | 1.00 | 37.19 |
| ATOM | 156 | CD1 | LEU | 1478 | -5.791  | 4.728  | 23.479 | 1.00 | 34.63 |
| ATOM | 157 | CD2 | LEU | 1478 | -5.959  | 6.914  | 22.251 | 1.00 | 34.88 |
| ATOM | 158 | C   | LEU | 1478 | -7.901  | 6.517  | 26.325 | 1.00 | 38.74 |
| ATOM | 159 | O   | LEU | 1478 | -8.146  | 7.733  | 26.309 | 1.00 | 41.20 |
| ATOM | 160 | N   | VAL | 1479 | -7.311  | 5.907  | 27.355 | 1.00 | 36.92 |
| ATOM | 162 | CA  | VAL | 1479 | -6.885  | 6.622  | 28.560 | 1.00 | 35.79 |
| ATOM | 163 | CB  | VAL | 1479 | -6.929  | 5.693  | 29.780 | 1.00 | 35.81 |
| ATOM | 164 | CG1 | VAL | 1479 | -6.579  | 6.453  | 31.032 | 1.00 | 40.11 |
| ATOM | 165 | CG2 | VAL | 1479 | -8.302  | 5.056  | 29.907 | 1.00 | 35.59 |
| ATOM | 166 | C   | VAL | 1479 | -5.438  | 7.118  | 28.362 | 1.00 | 36.60 |
| ATOM | 167 | O   | VAL | 1479 | -4.479  | 6.369  | 28.583 | 1.00 | 33.48 |
| ATOM | 168 | N   | LEU | 1480 | -5.282  | 8.372  | 27.938 | 1.00 | 39.09 |
| ATOM | 170 | CA  | LEU | 1480 | -3.949  | 8.932  | 27.675 | 1.00 | 42.05 |
| ATOM | 171 | CB  | LEU | 1480 | -4.040  | 10.277 | 26.952 | 1.00 | 41.08 |
| ATOM | 172 | CG  | LEU | 1480 | -4.633  | 10.286 | 25.529 | 1.00 | 39.28 |
| ATOM | 173 | CD1 | LEU | 1480 | -4.766  | 11.720 | 25.051 | 1.00 | 40.04 |
| ATOM | 174 | CD2 | LEU | 1480 | -3.758  | 9.489  | 24.582 | 1.00 | 39.66 |
| ATOM | 175 | C   | LEU | 1480 | -3.001  | 9.027  | 28.867 | 1.00 | 41.51 |
| ATOM | 176 | O   | LEU | 1480 | -3.312  | 9.637  | 29.886 | 1.00 | 41.73 |
| ATOM | 177 | N   | GLY | 1481 | -1.817  | 8.444  | 28.697 | 1.00 | 40.68 |
| ATOM | 179 | CA  | GLY | 1481 | -0.849  | 8.439  | 29.775 | 1.00 | 41.28 |
| ATOM | 180 | C   | GLY | 1481 | 0.412   | 9.225  | 29.529 | 1.00 | 43.08 |
| ATOM | 181 | O   | GLY | 1481 | 0.474   | 10.147 | 28.701 | 1.00 | 45.65 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 182 | N   | LYS | 1482 | 1.481  | 8.825  | 30.219 | 1.00 | 42.54 |
| ATOM | 184 | CA  | LYS | 1482 | 2.781  | 9.453  | 30.128 | 1.00 | 43.74 |
| ATOM | 185 | CB  | LYS | 1482 | 3.670  | 8.842  | 31.229 | 1.00 | 46.34 |
| ATOM | 186 | CG  | LYS | 1482 | 5.155  | 8.979  | 30.954 | 1.00 | 52.23 |
| ATOM | 187 | CD  | LYS | 1482 | 5.867  | 7.716  | 31.382 | 1.00 | 56.63 |
| ATOM | 188 | CE  | LYS | 1482 | 5.373  | 6.518  | 30.607 | 1.00 | 54.20 |
| ATOM | 189 | NZ  | LYS | 1482 | 6.199  | 5.320  | 30.955 | 1.00 | 59.97 |
| ATOM | 193 | C   | LYS | 1482 | 3.552  | 9.422  | 28.806 | 1.00 | 43.96 |
| ATOM | 194 | O   | LYS | 1482 | 3.557  | 8.422  | 28.111 | 1.00 | 44.68 |
| ATOM | 195 | N   | PRO | 1483 | 4.259  | 10.521 | 28.481 | 1.00 | 44.06 |
| ATOM | 196 | CD  | PRO | 1483 | 4.339  | 11.798 | 29.208 | 1.00 | 43.53 |
| ATOM | 197 | CA  | PRO | 1483 | 5.005  | 10.573 | 27.208 | 1.00 | 44.07 |
| ATOM | 198 | CB  | PRO | 1483 | 5.590  | 12.004 | 27.281 | 1.00 | 43.17 |
| ATOM | 199 | CG  | PRO | 1483 | 4.630  | 12.738 | 28.114 | 1.00 | 43.75 |
| ATOM | 200 | C   | PRO | 1483 | 6.172  | 9.543  | 27.116 | 1.00 | 43.47 |
| ATOM | 201 | O   | PRO | 1483 | 6.853  | 9.308  | 28.120 | 1.00 | 43.76 |
| ATOM | 202 | N   | LEU | 1484 | 6.408  | 9.001  | 25.932 | 1.00 | 41.71 |
| ATOM | 204 | CA  | LEU | 1484 | 7.512  | 8.045  | 25.663 | 1.00 | 38.05 |
| ATOM | 205 | CB  | LEU | 1484 | 6.964  | 6.803  | 24.927 | 1.00 | 33.38 |
| ATOM | 206 | CG  | LEU | 1484 | 6.001  | 5.992  | 25.770 | 1.00 | 31.95 |
| ATOM | 207 | CD1 | LEU | 1484 | 5.258  | 4.914  | 24.975 | 1.00 | 27.41 |
| ATOM | 208 | CD2 | LEU | 1484 | 6.750  | 5.396  | 26.953 | 1.00 | 29.64 |
| ATOM | 209 | C   | LEU | 1484 | 8.603  | 8.710  | 24.855 | 1.00 | 40.09 |
| ATOM | 210 | O   | LEU | 1484 | 8.334  | 9.499  | 23.960 | 1.00 | 41.74 |
| ATOM | 211 | N   | GLY | 1485 | 9.843  | 8.387  | 25.197 | 1.00 | 43.19 |
| ATOM | 213 | CA  | GLY | 1485 | 10.976 | 8.923  | 24.512 | 1.00 | 50.32 |
| ATOM | 214 | C   | GLY | 1485 | 11.261 | 10.408 | 24.697 | 1.00 | 54.65 |
| ATOM | 215 | O   | GLY | 1485 | 11.036 | 10.973 | 25.770 | 1.00 | 54.73 |
| ATOM | 216 | N   | GLU | 1486 | 11.747 | 11.072 | 23.647 | 1.00 | 59.07 |
| ATOM | 218 | CA  | GLU | 1486 | 12.081 | 12.483 | 23.666 | 1.00 | 61.01 |
| ATOM | 219 | CB  | GLU | 1486 | 13.489 | 12.646 | 24.275 | 1.00 | 62.51 |
| ATOM | 220 | C   | GLU | 1486 | 12.014 | 13.183 | 22.295 | 1.00 | 62.48 |
| ATOM | 221 | O   | GLU | 1486 | 12.901 | 13.970 | 21.949 | 1.00 | 64.10 |
| ATOM | 222 | N   | GLY | 1487 | 10.975 | 12.892 | 21.519 | 1.00 | 62.29 |
| ATOM | 224 | CA  | GLY | 1487 | 10.792 | 13.522 | 20.236 | 1.00 | 59.87 |
| ATOM | 225 | C   | GLY | 1487 | 11.469 | 12.881 | 19.044 | 1.00 | 58.88 |
| ATOM | 226 | O   | GLY | 1487 | 11.447 | 13.426 | 17.950 | 1.00 | 60.19 |
| ATOM | 227 | N   | ALA | 1488 | 12.073 | 11.714 | 19.239 | 1.00 | 57.19 |
| ATOM | 229 | CA  | ALA | 1488 | 12.721 | 11.016 | 18.140 | 1.00 | 55.59 |
| ATOM | 230 | CB  | ALA | 1488 | 13.477 | 9.804  | 18.663 | 1.00 | 56.35 |
| ATOM | 231 | C   | ALA | 1488 | 11.690 | 10.601 | 17.112 | 1.00 | 54.96 |
| ATOM | 232 | O   | ALA | 1488 | 11.927 | 10.626 | 15.913 | 1.00 | 56.42 |
| ATOM | 233 | N   | PHE | 1489 | 10.509 | 10.241 | 17.598 | 1.00 | 54.99 |
| ATOM | 235 | CA  | PHE | 1489 | 9.401  | 9.807  | 16.721 | 1.00 | 54.07 |
| ATOM | 236 | CB  | PHE | 1489 | 8.857  | 8.454  | 17.162 | 1.00 | 51.18 |
| ATOM | 237 | CG  | PHE | 1489 | 9.880  | 7.373  | 17.137 | 1.00 | 46.81 |
| ATOM | 238 | CD1 | PHE | 1489 | 10.641 | 7.093  | 18.271 | 1.00 | 46.81 |
| ATOM | 239 | CD2 | PHE | 1489 | 10.096 | 6.612  | 15.984 | 1.00 | 48.30 |
| ATOM | 240 | CE1 | PHE | 1489 | 11.585 | 6.090  | 18.262 | 1.00 | 47.41 |
| ATOM | 241 | CE2 | PHE | 1489 | 11.040 | 5.601  | 15.963 | 1.00 | 48.23 |
| ATOM | 242 | CZ  | PHE | 1489 | 11.794 | 5.336  | 17.111 | 1.00 | 47.94 |
| ATOM | 243 | C   | PHE | 1489 | 8.261  | 10.814 | 16.748 | 1.00 | 54.90 |

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|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 244 | O   | PHE | 1489 | 7.199  | 10.565 | 16.184 | 1.00 | 59.10 |
| ATOM | 245 | N   | GLY | 1490 | 8.431  | 11.908 | 17.504 | 1.00 | 53.55 |
| ATOM | 247 | CA  | GLY | 1490 | 7.432  | 12.958 | 17.611 | 1.00 | 50.20 |
| ATOM | 248 | C   | GLY | 1490 | 6.745  | 12.844 | 18.942 | 1.00 | 49.82 |
| ATOM | 249 | O   | GLY | 1490 | 7.266  | 12.161 | 19.837 | 1.00 | 50.95 |
| ATOM | 250 | N   | GLN | 1491 | 5.614  | 13.514 | 19.124 | 1.00 | 49.53 |
| ATOM | 252 | CA  | GLN | 1491 | 4.922  | 13.441 | 20.395 | 1.00 | 49.16 |
| ATOM | 253 | CB  | GLN | 1491 | 3.927  | 14.590 | 20.564 | 1.00 | 51.74 |
| ATOM | 254 | CG  | GLN | 1491 | 3.439  | 14.796 | 21.994 | 1.00 | 64.00 |
| ATOM | 255 | CD  | GLN | 1491 | 2.545  | 16.039 | 22.180 | 1.00 | 71.35 |
| ATOM | 256 | OE1 | GLN | 1491 | 2.534  | 16.922 | 21.352 | 1.00 | 77.94 |
| ATOM | 257 | NE2 | GLN | 1491 | 1.824  | 16.083 | 23.289 | 1.00 | 76.51 |
| ATOM | 260 | C   | GLN | 1491 | 4.207  | 12.083 | 20.505 | 1.00 | 45.94 |
| ATOM | 261 | O   | GLN | 1491 | 3.151  | 11.869 | 19.919 | 1.00 | 48.02 |
| ATOM | 262 | N   | VAL | 1492 | 4.848  | 11.129 | 21.184 | 1.00 | 41.00 |
| ATOM | 264 | CA  | VAL | 1492 | 4.293  | 9.810  | 21.421 | 1.00 | 37.44 |
| ATOM | 265 | CB  | VAL | 1492 | 5.235  | 8.665  | 21.025 | 1.00 | 34.74 |
| ATOM | 266 | CG1 | VAL | 1492 | 4.593  | 7.325  | 21.285 | 1.00 | 28.97 |
| ATOM | 267 | CG2 | VAL | 1492 | 5.632  | 8.769  | 19.553 | 1.00 | 35.78 |
| ATOM | 268 | C   | VAL | 1492 | 4.014  | 9.621  | 22.901 | 1.00 | 38.67 |
| ATOM | 269 | O   | VAL | 1492 | 4.907  | 9.769  | 23.735 | 1.00 | 38.62 |
| ATOM | 270 | N   | VAL | 1493 | 2.776  | 9.276  | 23.250 | 1.00 | 39.98 |
| ATOM | 272 | CA  | VAL | 1493 | 2.423  | 9.062  | 24.653 | 1.00 | 37.79 |
| ATOM | 273 | CB  | VAL | 1493 | 1.257  | 9.970  | 25.093 | 1.00 | 37.36 |
| ATOM | 274 | CG1 | VAL | 1493 | 1.489  | 11.403 | 24.689 | 1.00 | 39.11 |
| ATOM | 275 | CG2 | VAL | 1493 | -0.074 | 9.480  | 24.555 | 1.00 | 38.99 |
| ATOM | 276 | C   | VAL | 1493 | 2.052  | 7.603  | 24.877 | 1.00 | 36.38 |
| ATOM | 277 | O   | VAL | 1493 | 1.759  | 6.874  | 23.945 | 1.00 | 37.73 |
| ATOM | 278 | N   | LEU | 1494 | 2.094  | 7.176  | 26.123 | 1.00 | 35.42 |
| ATOM | 280 | CA  | LEU | 1494 | 1.718  | 5.817  | 26.483 | 1.00 | 33.65 |
| ATOM | 281 | CB  | LEU | 1494 | 2.536  | 5.291  | 27.670 | 1.00 | 29.88 |
| ATOM | 282 | CG  | LEU | 1494 | 2.117  | 3.945  | 28.279 | 1.00 | 30.31 |
| ATOM | 283 | CD1 | LEU | 1494 | 2.103  | 2.844  | 27.244 | 1.00 | 30.83 |
| ATOM | 284 | CD2 | LEU | 1494 | 3.049  | 3.574  | 29.400 | 1.00 | 32.12 |
| ATOM | 285 | C   | LEU | 1494 | 0.260  | 5.934  | 26.870 | 1.00 | 34.27 |
| ATOM | 286 | O   | LEU | 1494 | -0.168 | 6.994  | 27.348 | 1.00 | 34.85 |
| ATOM | 287 | N   | ALA | 1495 | -0.527 | 4.898  | 26.608 | 1.00 | 32.20 |
| ATOM | 289 | CA  | ALA | 1495 | -1.930 | 4.954  | 26.980 | 1.00 | 29.71 |
| ATOM | 290 | CB  | ALA | 1495 | -2.724 | 5.722  | 25.930 | 1.00 | 25.48 |
| ATOM | 291 | C   | ALA | 1495 | -2.499 | 3.567  | 27.183 | 1.00 | 28.85 |
| ATOM | 292 | O   | ALA | 1495 | -1.826 | 2.563  | 26.998 | 1.00 | 27.28 |
| ATOM | 293 | N   | GLU | 1496 | -3.743 | 3.519  | 27.615 | 1.00 | 32.20 |
| ATOM | 295 | CA  | GLU | 1496 | -4.413 | 2.250  | 27.824 | 1.00 | 33.34 |
| ATOM | 296 | CB  | GLU | 1496 | -4.735 | 2.063  | 29.301 | 1.00 | 35.65 |
| ATOM | 297 | CG  | GLU | 1496 | -3.521 | 1.962  | 30.198 | 1.00 | 39.14 |
| ATOM | 298 | CD  | GLU | 1496 | -3.899 | 2.045  | 31.663 | 1.00 | 42.57 |
| ATOM | 299 | OE1 | GLU | 1496 | -4.469 | 3.083  | 32.061 | 1.00 | 42.59 |
| ATOM | 300 | OE2 | GLU | 1496 | -3.646 | 1.069  | 32.407 | 1.00 | 42.76 |
| ATOM | 301 | C   | GLU | 1496 | -5.692 | 2.274  | 26.994 | 1.00 | 33.40 |
| ATOM | 302 | O   | GLU | 1496 | -6.439 | 3.261  | 27.017 | 1.00 | 34.36 |
| ATOM | 303 | N   | ALA | 1497 | -5.875 | 1.247  | 26.177 | 1.00 | 31.67 |
| ATOM | 305 | CA  | ALA | 1497 | -7.051 | 1.168  | 25.351 | 1.00 | 31.23 |

|      |     |     |     |      |         |         |        |      |       |
|------|-----|-----|-----|------|---------|---------|--------|------|-------|
| ATOM | 306 | CB  | ALA | 1497 | -6.671  | 0.750   | 23.953 | 1.00 | 28.13 |
| ATOM | 307 | C   | ALA | 1497 | -8.000  | 0.168   | 25.974 | 1.00 | 32.02 |
| ATOM | 308 | O   | ALA | 1497 | -7.599  | -0.954  | 26.261 | 1.00 | 33.45 |
| ATOM | 309 | N   | ILE | 1498 | -9.218  | 0.602   | 26.282 | 1.00 | 34.15 |
| ATOM | 311 | CA  | ILE | 1498 | -10.222 | -0.294  | 26.854 | 1.00 | 35.89 |
| ATOM | 312 | CB  | ILE | 1498 | -11.294 | 0.453   | 27.679 | 1.00 | 35.30 |
| ATOM | 313 | CG2 | ILE | 1498 | -12.267 | -0.551  | 28.300 | 1.00 | 32.95 |
| ATOM | 314 | CG1 | ILE | 1498 | -10.663 | 1.316   | 28.770 | 1.00 | 35.29 |
| ATOM | 315 | CD1 | ILE | 1498 | -11.656 | 2.262   | 29.419 | 1.00 | 31.69 |
| ATOM | 316 | C   | ILE | 1498 | -10.953 | -0.929  | 25.680 | 1.00 | 38.79 |
| ATOM | 317 | O   | ILE | 1498 | -11.571 | -0.227  | 24.877 | 1.00 | 37.46 |
| ATOM | 318 | N   | GLY | 1499 | -10.859 | -2.245  | 25.559 | 1.00 | 43.14 |
| ATOM | 320 | CA  | GLY | 1499 | -11.544 | -2.918  | 24.477 | 1.00 | 46.90 |
| ATOM | 321 | C   | GLY | 1499 | -10.673 | -3.299  | 23.298 | 1.00 | 49.69 |
| ATOM | 322 | O   | GLY | 1499 | -9.921  | -4.269  | 23.387 | 1.00 | 51.47 |
| ATOM | 323 | N   | LEU | 1500 | -10.739 | -2.508  | 22.223 | 1.00 | 49.92 |
| ATOM | 325 | CA  | LEU | 1500 | -10.003 | -2.765  | 20.973 | 1.00 | 49.62 |
| ATOM | 326 | CB  | LEU | 1500 | -8.478  | -2.898  | 21.185 | 1.00 | 49.96 |
| ATOM | 327 | CG  | LEU | 1500 | -7.504  | -1.703  | 21.167 | 1.00 | 49.26 |
| ATOM | 328 | CD1 | LEU | 1500 | -6.069  | -2.217  | 21.284 | 1.00 | 47.17 |
| ATOM | 329 | CD2 | LEU | 1500 | -7.638  | -0.883  | 19.899 | 1.00 | 47.80 |
| ATOM | 330 | C   | LEU | 1500 | -10.535 | -4.027  | 20.275 | 1.00 | 49.49 |
| ATOM | 331 | O   | LEU | 1500 | -10.480 | -5.145  | 20.806 | 1.00 | 47.99 |
| ATOM | 332 | N   | PRO | 1505 | -13.253 | -5.837  | 25.284 | 1.00 | 50.58 |
| ATOM | 333 | CD  | PRO | 1505 | -13.877 | -7.173  | 25.239 | 1.00 | 51.43 |
| ATOM | 334 | CA  | PRO | 1505 | -14.197 | -4.825  | 25.779 | 1.00 | 48.08 |
| ATOM | 335 | CB  | PRO | 1505 | -15.548 | -5.521  | 25.627 | 1.00 | 48.59 |
| ATOM | 336 | CG  | PRO | 1505 | -15.216 | -6.944  | 25.940 | 1.00 | 51.66 |
| ATOM | 337 | C   | PRO | 1505 | -13.904 | -4.396  | 27.227 | 1.00 | 44.58 |
| ATOM | 338 | O   | PRO | 1505 | -13.883 | -3.202  | 27.531 | 1.00 | 42.73 |
| ATOM | 339 | N   | ASN | 1506 | -13.640 | -5.363  | 28.102 | 1.00 | 42.10 |
| ATOM | 341 | CA  | ASN | 1506 | -13.337 | -5.053  | 29.497 | 1.00 | 45.05 |
| ATOM | 342 | CB  | ASN | 1506 | -14.202 | -5.893  | 30.434 | 1.00 | 47.04 |
| ATOM | 343 | CG  | ASN | 1506 | -15.657 | -5.493  | 30.395 | 1.00 | 48.72 |
| ATOM | 344 | OD1 | ASN | 1506 | -15.999 | -4.309  | 30.487 | 1.00 | 50.48 |
| ATOM | 345 | ND2 | ASN | 1506 | -16.529 | -6.478  | 30.260 | 1.00 | 51.15 |
| ATOM | 348 | C   | ASN | 1506 | -11.863 | -5.251  | 29.836 | 1.00 | 46.50 |
| ATOM | 349 | O   | ASN | 1506 | -11.487 | -5.343  | 31.008 | 1.00 | 46.50 |
| ATOM | 350 | N   | ARG | 1507 | -11.029 | -5.284  | 28.806 | 1.00 | 46.99 |
| ATOM | 352 | CA  | ARG | 1507 | -9.594  | -5.466  | 28.976 | 1.00 | 47.52 |
| ATOM | 353 | CB  | ARG | 1507 | -9.111  | -6.650  | 28.142 | 1.00 | 54.20 |
| ATOM | 354 | CG  | ARG | 1507 | -9.327  | -7.993  | 28.781 | 1.00 | 64.52 |
| ATOM | 355 | CD  | ARG | 1507 | -8.402  | -8.180  | 29.963 | 1.00 | 71.17 |
| ATOM | 356 | NE  | ARG | 1507 | -8.592  | -9.494  | 30.556 | 1.00 | 76.52 |
| ATOM | 358 | CZ  | ARG | 1507 | -8.030  | -9.898  | 31.689 | 1.00 | 81.64 |
| ATOM | 359 | NH1 | ARG | 1507 | -7.219  | -9.096  | 32.375 | 1.00 | 83.30 |
| ATOM | 362 | NH2 | ARG | 1507 | -8.340  | -11.093 | 32.174 | 1.00 | 84.44 |
| ATOM | 365 | C   | ARG | 1507 | -8.871  | -4.234  | 28.485 | 1.00 | 43.46 |
| ATOM | 366 | O   | ARG | 1507 | -9.227  | -3.695  | 27.440 | 1.00 | 42.73 |
| ATOM | 367 | N   | VAL | 1508 | -7.912  | -3.749  | 29.265 | 1.00 | 40.84 |
| ATOM | 369 | CA  | VAL | 1508 | -7.143  | -2.598  | 28.830 | 1.00 | 38.27 |
| ATOM | 370 | CB  | VAL | 1508 | -6.786  | -1.604  | 29.961 | 1.00 | 34.90 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 371 | CG1 | VAL | 1508 | -8.038 | -1.124 | 30.646 | 1.00 | 41.81 |
| ATOM | 372 | CG2 | VAL | 1508 | -5.850 | -2.226 | 30.944 | 1.00 | 35.89 |
| ATOM | 373 | C   | VAL | 1508 | -5.874 | -3.147 | 28.211 | 1.00 | 36.81 |
| ATOM | 374 | O   | VAL | 1508 | -5.371 | -4.191 | 28.637 | 1.00 | 35.13 |
| ATOM | 375 | N   | THR | 1509 | -5.393 | -2.465 | 27.180 | 1.00 | 36.04 |
| ATOM | 377 | CA  | THR | 1509 | -4.184 | -2.854 | 26.485 | 1.00 | 33.31 |
| ATOM | 378 | CB  | THR | 1509 | -4.503 | -3.254 | 25.025 | 1.00 | 33.79 |
| ATOM | 379 | OG1 | THR | 1509 | -5.511 | -4.275 | 25.014 | 1.00 | 33.98 |
| ATOM | 381 | CG2 | THR | 1509 | -3.259 | -3.774 | 24.321 | 1.00 | 32.78 |
| ATOM | 382 | C   | THR | 1509 | -3.268 | -1.627 | 26.453 | 1.00 | 32.37 |
| ATOM | 383 | O   | THR | 1509 | -3.718 | -0.533 | 26.113 | 1.00 | 31.97 |
| ATOM | 384 | N   | LYS | 1510 | -2.015 | -1.786 | 26.884 | 1.00 | 32.96 |
| ATOM | 386 | CA  | LYS | 1510 | -1.071 | -0.673 | 26.828 | 1.00 | 33.25 |
| ATOM | 387 | CB  | LYS | 1510 | 0.157  | -0.902 | 27.699 | 1.00 | 34.65 |
| ATOM | 388 | CG  | LYS | 1510 | -0.093 | -0.909 | 29.197 | 1.00 | 39.64 |
| ATOM | 389 | CD  | LYS | 1510 | 1.237  | -1.105 | 29.913 | 1.00 | 43.51 |
| ATOM | 390 | CE  | LYS | 1510 | 1.110  | -1.949 | 31.173 | 1.00 | 48.42 |
| ATOM | 391 | NZ  | LYS | 1510 | 0.399  | -1.256 | 32.287 | 1.00 | 53.03 |
| ATOM | 395 | C   | LYS | 1510 | -0.646 | -0.550 | 25.370 | 1.00 | 32.26 |
| ATOM | 396 | O   | LYS | 1510 | -0.240 | -1.533 | 24.736 | 1.00 | 30.20 |
| ATOM | 397 | N   | VAL | 1511 | -0.760 | 0.665  | 24.849 | 1.00 | 32.28 |
| ATOM | 399 | CA  | VAL | 1511 | -0.436 | 0.980  | 23.472 | 1.00 | 30.73 |
| ATOM | 400 | CB  | VAL | 1511 | -1.738 | 1.140  | 22.666 | 1.00 | 32.25 |
| ATOM | 401 | CG1 | VAL | 1511 | -2.566 | -0.147 | 22.723 | 1.00 | 29.00 |
| ATOM | 402 | CG2 | VAL | 1511 | -2.549 | 2.347  | 23.193 | 1.00 | 29.17 |
| ATOM | 403 | C   | VAL | 1511 | 0.329  | 2.307  | 23.423 | 1.00 | 30.91 |
| ATOM | 404 | O   | VAL | 1511 | 0.445  | 3.008  | 24.433 | 1.00 | 31.94 |
| ATOM | 405 | N   | ALA | 1512 | 0.842  | 2.658  | 22.250 | 1.00 | 27.30 |
| ATOM | 407 | CA  | ALA | 1512 | 1.550  | 3.914  | 22.094 | 1.00 | 24.22 |
| ATOM | 408 | CB  | ALA | 1512 | 2.921  | 3.694  | 21.493 | 1.00 | 23.39 |
| ATOM | 409 | C   | ALA | 1512 | 0.698  | 4.769  | 21.181 | 1.00 | 23.62 |
| ATOM | 410 | O   | ALA | 1512 | 0.116  | 4.271  | 20.228 | 1.00 | 22.69 |
| ATOM | 411 | N   | VAL | 1513 | 0.605  | 6.054  | 21.484 | 1.00 | 27.51 |
| ATOM | 413 | CA  | VAL | 1513 | -0.192 | 6.984  | 20.688 | 1.00 | 30.03 |
| ATOM | 414 | CB  | VAL | 1513 | -1.359 | 7.613  | 21.522 | 1.00 | 28.31 |
| ATOM | 415 | CG1 | VAL | 1513 | -2.218 | 8.522  | 20.650 | 1.00 | 28.93 |
| ATOM | 416 | CG2 | VAL | 1513 | -2.214 | 6.542  | 22.159 | 1.00 | 26.00 |
| ATOM | 417 | C   | VAL | 1513 | 0.674  | 8.108  | 20.107 | 1.00 | 31.21 |
| ATOM | 418 | O   | VAL | 1513 | 1.370  | 8.816  | 20.834 | 1.00 | 29.73 |
| ATOM | 419 | N   | LYS | 1514 | 0.631  | 8.225  | 18.784 | 1.00 | 33.99 |
| ATOM | 421 | CA  | LYS | 1514 | 1.342  | 9.258  | 18.037 | 1.00 | 35.44 |
| ATOM | 422 | CB  | LYS | 1514 | 1.831  | 8.692  | 16.707 | 1.00 | 34.55 |
| ATOM | 423 | CG  | LYS | 1514 | 2.835  | 7.586  | 16.872 | 1.00 | 35.38 |
| ATOM | 424 | CD  | LYS | 1514 | 3.025  | 6.807  | 15.599 | 1.00 | 36.87 |
| ATOM | 425 | CE  | LYS | 1514 | 3.457  | 7.710  | 14.438 | 1.00 | 45.19 |
| ATOM | 426 | NZ  | LYS | 1514 | 4.598  | 8.622  | 14.755 | 1.00 | 44.31 |
| ATOM | 430 | C   | LYS | 1514 | 0.304  | 10.345 | 17.761 | 1.00 | 35.97 |
| ATOM | 431 | O   | LYS | 1514 | -0.806 | 10.037 | 17.299 | 1.00 | 34.39 |
| ATOM | 432 | N   | MET | 1515 | 0.673  | 11.596 | 18.028 | 1.00 | 38.17 |
| ATOM | 434 | CA  | MET | 1515 | -0.207 | 12.747 | 17.835 | 1.00 | 41.17 |
| ATOM | 435 | CB  | MET | 1515 | -0.901 | 13.098 | 19.145 | 1.00 | 39.54 |
| ATOM | 436 | CG  | MET | 1515 | 0.075  | 13.428 | 20.255 | 1.00 | 39.11 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 437 | SD  | MET | 1515 | -0.766 | 13.612 | 21.799 | 1.00 | 43.85 |
| ATOM | 438 | CE  | MET | 1515 | -1.212 | 11.937 | 22.087 | 1.00 | 46.18 |
| ATOM | 439 | C   | MET | 1515 | 0.612  | 13.939 | 17.391 | 1.00 | 43.65 |
| ATOM | 440 | O   | MET | 1515 | 1.834  | 13.905 | 17.445 | 1.00 | 45.72 |
| ATOM | 441 | N   | LEU | 1516 | -0.053 | 14.962 | 16.872 | 1.00 | 48.73 |
| ATOM | 443 | CA  | LEU | 1516 | 0.640  | 16.175 | 16.448 | 1.00 | 52.23 |
| ATOM | 444 | CB  | LEU | 1516 | -0.152 | 16.917 | 15.374 | 1.00 | 49.77 |
| ATOM | 445 | CG  | LEU | 1516 | -0.413 | 16.254 | 14.036 | 1.00 | 48.04 |
| ATOM | 446 | CD1 | LEU | 1516 | -1.418 | 17.104 | 13.285 | 1.00 | 48.16 |
| ATOM | 447 | CD2 | LEU | 1516 | 0.884  | 16.102 | 13.265 | 1.00 | 42.80 |
| ATOM | 448 | C   | LEU | 1516 | 0.810  | 17.119 | 17.631 | 1.00 | 55.67 |
| ATOM | 449 | O   | LEU | 1516 | 0.217  | 16.927 | 18.703 | 1.00 | 53.99 |
| ATOM | 450 | N   | LYS | 1517 | 1.580  | 18.174 | 17.402 | 1.00 | 60.97 |
| ATOM | 452 | CA  | LYS | 1517 | 1.823  | 19.193 | 18.416 | 1.00 | 65.19 |
| ATOM | 453 | CB  | LYS | 1517 | 3.274  | 19.668 | 18.344 | 1.00 | 69.34 |
| ATOM | 454 | CG  | LYS | 1517 | 4.294  | 18.559 | 18.529 | 1.00 | 72.86 |
| ATOM | 455 | CD  | LYS | 1517 | 5.646  | 18.935 | 17.929 | 1.00 | 74.91 |
| ATOM | 456 | CE  | LYS | 1517 | 6.686  | 17.851 | 18.197 | 1.00 | 74.38 |
| ATOM | 457 | NZ  | LYS | 1517 | 8.010  | 18.241 | 17.649 | 1.00 | 75.45 |
| ATOM | 461 | C   | LYS | 1517 | 0.879  | 20.357 | 18.139 | 1.00 | 65.97 |
| ATOM | 462 | O   | LYS | 1517 | 0.303  | 20.451 | 17.053 | 1.00 | 64.59 |
| ATOM | 463 | N   | SER | 1518 | 0.776  | 21.270 | 19.098 | 1.00 | 68.20 |
| ATOM | 465 | CA  | SER | 1518 | -0.107 | 22.422 | 18.972 | 1.00 | 71.92 |
| ATOM | 466 | CB  | SER | 1518 | -0.002 | 23.322 | 20.202 | 1.00 | 69.89 |
| ATOM | 467 | C   | SER | 1518 | 0.144  | 23.247 | 17.718 | 1.00 | 74.68 |
| ATOM | 468 | O   | SER | 1518 | -0.798 | 23.604 | 17.006 | 1.00 | 77.44 |
| ATOM | 469 | N   | ASP | 1519 | 1.417  | 23.493 | 17.422 | 1.00 | 75.04 |
| ATOM | 471 | CA  | ASP | 1519 | 1.799  | 24.299 | 16.264 | 1.00 | 76.48 |
| ATOM | 472 | CB  | ASP | 1519 | 3.126  | 25.011 | 16.539 | 1.00 | 77.59 |
| ATOM | 473 | C   | ASP | 1519 | 1.912  | 23.525 | 14.958 | 1.00 | 75.88 |
| ATOM | 474 | O   | ASP | 1519 | 2.374  | 24.075 | 13.959 | 1.00 | 77.52 |
| ATOM | 475 | N   | ALA | 1520 | 1.486  | 22.265 | 14.956 | 1.00 | 74.39 |
| ATOM | 477 | CA  | ALA | 1520 | 1.574  | 21.439 | 13.758 | 1.00 | 72.83 |
| ATOM | 478 | CB  | ALA | 1520 | 0.930  | 20.079 | 14.010 | 1.00 | 73.06 |
| ATOM | 479 | C   | ALA | 1520 | 0.889  | 22.153 | 12.598 | 1.00 | 71.47 |
| ATOM | 480 | O   | ALA | 1520 | -0.096 | 22.858 | 12.797 | 1.00 | 73.48 |
| ATOM | 481 | N   | THR | 1521 | 1.440  | 22.015 | 11.401 | 1.00 | 69.15 |
| ATOM | 483 | CA  | THR | 1521 | 0.858  | 22.653 | 10.234 | 1.00 | 70.05 |
| ATOM | 484 | CB  | THR | 1521 | 1.950  | 23.110 | 9.272  | 1.00 | 70.21 |
| ATOM | 485 | OG1 | THR | 1521 | 2.505  | 21.969 | 8.607  | 1.00 | 72.71 |
| ATOM | 487 | CG2 | THR | 1521 | 3.053  | 23.815 | 10.043 | 1.00 | 71.01 |
| ATOM | 488 | C   | THR | 1521 | -0.015 | 21.616 | 9.550  | 1.00 | 70.64 |
| ATOM | 489 | O   | THR | 1521 | 0.015  | 20.443 | 9.932  | 1.00 | 72.38 |
| ATOM | 490 | N   | GLU | 1522 | -0.782 | 22.026 | 8.542  | 1.00 | 69.70 |
| ATOM | 492 | CA  | GLU | 1522 | -1.623 | 21.081 | 7.815  | 1.00 | 67.41 |
| ATOM | 493 | CB  | GLU | 1522 | -2.478 | 21.800 | 6.761  | 1.00 | 70.01 |
| ATOM | 494 | C   | GLU | 1522 | -0.718 | 20.024 | 7.168  | 1.00 | 64.50 |
| ATOM | 495 | O   | GLU | 1522 | -1.125 | 18.878 | 7.006  | 1.00 | 63.76 |
| ATOM | 496 | N   | LYS | 1523 | 0.512  | 20.419 | 6.827  | 1.00 | 60.75 |
| ATOM | 498 | CA  | LYS | 1523 | 1.483  | 19.502 | 6.240  | 1.00 | 58.57 |
| ATOM | 499 | CB  | LYS | 1523 | 2.782  | 20.230 | 5.883  | 1.00 | 60.63 |
| ATOM | 500 | CG  | LYS | 1523 | 3.909  | 19.318 | 5.361  | 1.00 | 62.47 |



|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 501 | CD  | LYS | 1523 | 3.459  | 18.461 | 4.168  | 1.00 | 63.35 |
| ATOM | 502 | CE  | LYS | 1523 | 4.633  | 17.700 | 3.559  | 1.00 | 66.57 |
| ATOM | 503 | NZ  | LYS | 1523 | 4.210  | 16.733 | 2.498  | 1.00 | 69.56 |
| ATOM | 507 | C   | LYS | 1523 | 1.763  | 18.441 | 7.281  | 1.00 | 55.98 |
| ATOM | 508 | O   | LYS | 1523 | 1.790  | 17.251 | 6.972  | 1.00 | 56.37 |
| ATOM | 509 | N   | ASP | 1524 | 1.960  | 18.885 | 8.517  | 1.00 | 52.16 |
| ATOM | 511 | CA  | ASP | 1524 | 2.211  | 17.980 | 9.630  | 1.00 | 48.91 |
| ATOM | 512 | CB  | ASP | 1524 | 2.487  | 18.762 | 10.915 | 1.00 | 50.87 |
| ATOM | 513 | CG  | ASP | 1524 | 3.865  | 19.401 | 10.928 | 1.00 | 53.00 |
| ATOM | 514 | OD1 | ASP | 1524 | 4.004  | 20.511 | 11.499 | 1.00 | 53.77 |
| ATOM | 515 | OD2 | ASP | 1524 | 4.816  | 18.785 | 10.394 | 1.00 | 56.30 |
| ATOM | 516 | C   | ASP | 1524 | 1.032  | 17.031 | 9.831  | 1.00 | 45.34 |
| ATOM | 517 | O   | ASP | 1524 | 1.221  | 15.858 | 10.176 | 1.00 | 45.63 |
| ATOM | 518 | N   | LEU | 1525 | -0.176 | 17.530 | 9.593  | 1.00 | 40.15 |
| ATOM | 520 | CA  | LEU | 1525 | -1.368 | 16.715 | 9.711  | 1.00 | 39.38 |
| ATOM | 521 | CB  | LEU | 1525 | -2.624 | 17.588 | 9.633  | 1.00 | 41.66 |
| ATOM | 522 | CG  | LEU | 1525 | -4.020 | 16.937 | 9.585  | 1.00 | 42.75 |
| ATOM | 523 | CD1 | LEU | 1525 | -4.245 | 15.945 | 10.727 | 1.00 | 42.97 |
| ATOM | 524 | CD2 | LEU | 1525 | -5.058 | 18.026 | 9.644  | 1.00 | 42.24 |
| ATOM | 525 | C   | LEU | 1525 | -1.340 | 15.699 | 8.575  | 1.00 | 39.77 |
| ATOM | 526 | O   | LEU | 1525 | -1.509 | 14.506 | 8.813  | 1.00 | 39.11 |
| ATOM | 527 | N   | SER | 1526 | -1.062 | 16.172 | 7.361  | 1.00 | 39.64 |
| ATOM | 529 | CA  | SER | 1526 | -0.998 | 15.320 | 6.181  | 1.00 | 40.65 |
| ATOM | 530 | CB  | SER | 1526 | -0.541 | 16.105 | 4.947  | 1.00 | 43.32 |
| ATOM | 531 | CG  | SER | 1526 | -1.398 | 17.190 | 4.656  | 1.00 | 52.41 |
| ATOM | 533 | C   | SER | 1526 | -0.015 | 14.201 | 6.383  | 1.00 | 39.12 |
| ATOM | 534 | O   | SER | 1526 | -0.346 | 13.038 | 6.198  | 1.00 | 41.75 |
| ATOM | 535 | N   | ASP | 1527 | 1.203  | 14.553 | 6.769  | 1.00 | 38.30 |
| ATOM | 537 | CA  | ASP | 1527 | 2.244  | 13.552 | 6.969  | 1.00 | 39.28 |
| ATOM | 538 | CB  | ASP | 1527 | 3.531  | 14.208 | 7.477  | 1.00 | 41.16 |
| ATOM | 539 | CG  | ASP | 1527 | 4.218  | 15.069 | 6.404  | 1.00 | 45.20 |
| ATOM | 540 | OD1 | ASP | 1527 | 3.861  | 14.972 | 5.198  | 1.00 | 43.25 |
| ATOM | 541 | OD2 | ASP | 1527 | 5.132  | 15.840 | 6.788  | 1.00 | 45.93 |
| ATOM | 542 | C   | ASP | 1527 | 1.788  | 12.443 | 7.903  | 1.00 | 37.34 |
| ATOM | 543 | O   | ASP | 1527 | 1.867  | 11.259 | 7.557  | 1.00 | 37.24 |
| ATOM | 544 | N   | LEU | 1528 | 1.224  | 12.935 | 9.036  | 1.00 | 35.88 |
| ATOM | 546 | CA  | LEU | 1528 | 0.728  | 11.874 | 10.009 | 1.00 | 35.07 |
| ATOM | 547 | CB  | LEU | 1528 | 0.185  | 12.606 | 11.242 | 1.00 | 34.38 |
| ATOM | 548 | CG  | LEU | 1528 | -0.146 | 11.789 | 12.491 | 1.00 | 35.86 |
| ATOM | 549 | CD1 | LEU | 1528 | 1.009  | 10.845 | 12.820 | 1.00 | 34.83 |
| ATOM | 550 | CD2 | LEU | 1528 | -0.435 | 12.711 | 13.642 | 1.00 | 29.98 |
| ATOM | 551 | C   | LEU | 1528 | -0.351 | 10.977 | 9.374  | 1.00 | 33.31 |
| ATOM | 552 | O   | LEU | 1528 | -0.342 | 9.756  | 9.552  | 1.00 | 34.55 |
| ATOM | 553 | N   | ILE | 1529 | -1.236 | 11.575 | 8.585  | 1.00 | 32.16 |
| ATOM | 555 | CA  | ILE | 1529 | -2.306 | 10.829 | 7.924  | 1.00 | 30.94 |
| ATOM | 556 | CB  | ILE | 1529 | -3.304 | 11.757 | 7.178  | 1.00 | 27.07 |
| ATOM | 557 | CG2 | ILE | 1529 | -4.388 | 10.926 | 6.521  | 1.00 | 26.06 |
| ATOM | 558 | CG1 | ILE | 1529 | -3.953 | 12.723 | 8.169  | 1.00 | 23.67 |
| ATOM | 559 | CD1 | ILE | 1529 | -4.877 | 13.736 | 7.526  | 1.00 | 22.34 |
| ATOM | 560 | C   | ILE | 1529 | -1.684 | 9.856  | 6.947  | 1.00 | 31.34 |
| ATOM | 561 | O   | ILE | 1529 | -2.058 | 8.683  | 6.912  | 1.00 | 33.57 |
| ATOM | 562 | N   | SER | 1530 | -0.703 | 10.331 | 6.191  | 1.00 | 30.74 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 564 | CA  | SER | 1530 | 0.007  | 9.496  | 5.230  | 1.00 | 32.04 |
| ATOM | 565 | CB  | SER | 1530 | 1.109  | 10.302 | 4.548  | 1.00 | 35.20 |
| ATOM | 566 | OG  | SER | 1530 | 0.596  | 11.501 | 4.002  | 1.00 | 41.97 |
| ATOM | 568 | C   | SER | 1530 | 0.620  | 8.262  | 5.895  | 1.00 | 29.06 |
| ATOM | 569 | O   | SER | 1530 | 0.478  | 7.140  | 5.377  | 1.00 | 26.64 |
| ATOM | 570 | N   | GLU | 1531 | 1.287  | 8.464  | 7.034  | 1.00 | 23.86 |
| ATOM | 572 | CA  | GLU | 1531 | 1.918  | 7.367  | 7.759  | 1.00 | 23.86 |
| ATOM | 573 | CB  | GLU | 1531 | 2.729  | 7.893  | 8.944  | 1.00 | 25.69 |
| ATOM | 574 | CG  | GLU | 1531 | 3.501  | 6.803  | 9.701  | 1.00 | 23.65 |
| ATOM | 575 | CD  | GLU | 1531 | 4.341  | 7.319  | 10.868 | 1.00 | 26.03 |
| ATOM | 576 | OE1 | GLU | 1531 | 4.927  | 6.473  | 11.572 | 1.00 | 25.92 |
| ATOM | 577 | OE2 | GLU | 1531 | 4.435  | 8.549  | 11.094 | 1.00 | 26.55 |
| ATOM | 578 | C   | GLU | 1531 | 0.906  | 6.325  | 8.222  | 1.00 | 25.44 |
| ATOM | 579 | O   | GLU | 1531 | 1.200  | 5.126  | 8.228  | 1.00 | 23.67 |
| ATOM | 580 | N   | MET | 1532 | -0.285 | 6.788  | 8.600  | 1.00 | 26.39 |
| ATOM | 582 | CA  | MET | 1532 | -1.365 | 5.898  | 9.048  | 1.00 | 26.57 |
| ATOM | 583 | CB  | MET | 1532 | -2.473 | 6.720  | 9.714  | 1.00 | 24.81 |
| ATOM | 584 | CG  | MET | 1532 | -3.645 | 5.889  | 10.191 | 1.00 | 27.47 |
| ATOM | 585 | SD  | MET | 1532 | -4.969 | 5.899  | 10.860 | 1.00 | 28.43 |
| ATOM | 586 | CE  | MET | 1532 | -5.178 | 8.102  | 9.576  | 1.00 | 24.45 |
| ATOM | 587 | C   | MET | 1532 | -1.923 | 5.076  | 7.861  | 1.00 | 28.30 |
| ATOM | 588 | O   | MET | 1532 | -2.048 | 3.850  | 7.933  | 1.00 | 27.95 |
| ATOM | 589 | N   | GLU | 1533 | -2.221 | 5.760  | 6.762  | 1.00 | 28.95 |
| ATOM | 591 | CA  | GLU | 1533 | -2.732 | 5.111  | 5.565  | 1.00 | 30.32 |
| ATOM | 592 | CB  | GLU | 1533 | -2.983 | 6.143  | 4.476  | 1.00 | 25.40 |
| ATOM | 593 | CG  | GLU | 1533 | -4.064 | 7.127  | 4.852  | 1.00 | 26.09 |
| ATOM | 594 | CD  | GLU | 1533 | -5.402 | 6.461  | 5.119  | 1.00 | 25.89 |
| ATOM | 595 | OE1 | GLU | 1533 | -5.913 | 5.745  | 4.240  | 1.00 | 27.24 |
| ATOM | 596 | OE2 | GLU | 1533 | -5.964 | 6.662  | 6.209  | 1.00 | 30.00 |
| ATOM | 597 | C   | GLU | 1533 | -1.723 | 4.089  | 5.093  | 1.00 | 31.64 |
| ATOM | 598 | O   | GLU | 1533 | -2.080 | 2.983  | 4.706  | 1.00 | 33.57 |
| ATOM | 599 | N   | MET | 1534 | -0.455 | 4.472  | 5.166  | 1.00 | 33.57 |
| ATOM | 601 | CA  | MET | 1534 | 0.664  | 3.618  | 4.793  | 1.00 | 32.86 |
| ATOM | 602 | CB  | MET | 1534 | 1.957  | 4.390  | 5.003  | 1.00 | 32.89 |
| ATOM | 603 | CG  | MET | 1534 | 3.159  | 3.559  | 4.851  | 1.00 | 39.27 |
| ATOM | 604 | SD  | MET | 1534 | 3.577  | 3.513  | 3.164  | 1.00 | 51.24 |
| ATOM | 605 | CE  | MET | 1534 | 5.153  | 4.319  | 3.204  | 1.00 | 44.97 |
| ATOM | 606 | C   | MET | 1534 | 0.670  | 2.373  | 5.681  | 1.00 | 31.84 |
| ATOM | 607 | O   | MET | 1534 | 0.816  | 1.250  | 5.198  | 1.00 | 33.78 |
| ATOM | 608 | N   | MET | 1535 | 0.509  | 2.571  | 6.982  | 1.00 | 30.36 |
| ATOM | 610 | CA  | MET | 1535 | 0.469  | 1.453  | 7.902  | 1.00 | 28.83 |
| ATOM | 611 | CB  | MET | 1535 | 0.419  | 1.946  | 9.352  | 1.00 | 24.75 |
| ATOM | 612 | CG  | MET | 1535 | 1.717  | 2.540  | 9.850  | 1.00 | 21.50 |
| ATOM | 613 | SD  | MET | 1535 | 1.722  | 2.764  | 11.628 | 1.00 | 22.97 |
| ATOM | 614 | CE  | MET | 1535 | 1.681  | 4.534  | 11.727 | 1.00 | 23.90 |
| ATOM | 615 | C   | MET | 1535 | -0.725 | 0.540  | 7.572  | 1.00 | 30.33 |
| ATOM | 616 | O   | MET | 1535 | -0.636 | -0.694 | 7.706  | 1.00 | 33.31 |
| ATOM | 617 | N   | LYS | 1536 | -1.823 | 1.135  | 7.104  | 1.00 | 28.91 |
| ATOM | 619 | CA  | LYS | 1536 | -3.011 | 0.364  | 6.732  | 1.00 | 28.07 |
| ATOM | 620 | CB  | LYS | 1536 | -4.176 | 1.289  | 6.413  | 1.00 | 25.52 |
| ATOM | 621 | CG  | LYS | 1536 | -4.689 | 2.080  | 7.579  | 1.00 | 21.46 |
| ATOM | 622 | CD  | LYS | 1536 | -5.810 | 2.979  | 7.127  | 1.00 | 19.89 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 623 | CE  | LYS | 1536 | -6.414 | 3.717   | 8.288  | 1.00 | 23.50 |
| ATOM | 624 | NZ  | LYS | 1536 | -7.469 | 4.668   | 7.850  | 1.00 | 23.53 |
| ATOM | 628 | C   | LYS | 1536 | -2.765 | -0.542  | 5.530  | 1.00 | 29.09 |
| ATOM | 629 | O   | LYS | 1536 | -3.127 | -1.708  | 5.550  | 1.00 | 34.02 |
| ATOM | 630 | N   | MET | 1537 | -2.141 | -0.009  | 4.488  | 1.00 | 29.03 |
| ATOM | 632 | CA  | MET | 1537 | -1.869 | -0.792  | 3.288  | 1.00 | 30.13 |
| ATOM | 633 | CB  | MET | 1537 | -1.315 | 0.111   | 2.177  | 1.00 | 31.96 |
| ATOM | 634 | CG  | MET | 1537 | -2.304 | 1.114   | 1.589  | 1.00 | 35.15 |
| ATOM | 635 | SD  | MET | 1537 | -3.757 | 0.380   | 0.787  | 1.00 | 41.18 |
| ATOM | 636 | CE  | MET | 1537 | -3.026 | -0.360  | -0.666 | 1.00 | 43.05 |
| ATOM | 637 | C   | MET | 1537 | -0.905 | -1.946  | 3.531  | 1.00 | 30.22 |
| ATOM | 638 | O   | MET | 1537 | -1.118 | -3.051  | 3.045  | 1.00 | 30.88 |
| ATOM | 639 | N   | ILE | 1538 | 0.164  | -1.686  | 4.275  | 1.00 | 30.91 |
| ATOM | 641 | CA  | ILE | 1538 | 1.192  | -2.701  | 4.536  | 1.00 | 30.29 |
| ATOM | 642 | CB  | ILE | 1538 | 2.429  | -2.082  | 5.221  | 1.00 | 28.64 |
| ATOM | 643 | CG2 | ILE | 1538 | 3.493  | -3.142  | 5.453  | 1.00 | 29.84 |
| ATOM | 644 | CG1 | ILE | 1538 | 3.025  | -1.030  | 4.287  | 1.00 | 32.82 |
| ATOM | 645 | CD1 | ILE | 1538 | 4.358  | -0.446  | 4.763  | 1.00 | 38.38 |
| ATOM | 646 | C   | ILE | 1538 | 0.759  | -4.000  | 5.237  | 1.00 | 29.07 |
| ATOM | 647 | O   | ILE | 1538 | 1.229  | -5.078  | 4.876  | 1.00 | 28.30 |
| ATOM | 648 | N   | GLY | 1539 | -0.178 | -3.925  | 6.174  | 1.00 | 27.61 |
| ATOM | 650 | CA  | GLY | 1539 | -0.592 | -5.147  | 6.849  | 1.00 | 26.22 |
| ATOM | 651 | C   | GLY | 1539 | 0.273  | -5.484  | 8.055  | 1.00 | 25.67 |
| ATOM | 652 | O   | GLY | 1539 | 1.345  | -4.906  | 8.241  | 1.00 | 28.05 |
| ATOM | 653 | N   | LYS | 1540 | -0.150 | -6.483  | 8.819  | 1.00 | 23.80 |
| ATOM | 655 | CA  | LYS | 1540 | 0.532  | -6.876  | 10.046 | 1.00 | 21.77 |
| ATOM | 656 | CB  | LYS | 1540 | -0.491 | -7.436  | 11.045 | 1.00 | 20.04 |
| ATOM | 657 | CG  | LYS | 1540 | -1.505 | -6.435  | 11.480 | 1.00 | 24.45 |
| ATOM | 658 | CD  | LYS | 1540 | -2.472 | -6.997  | 12.488 | 1.00 | 32.57 |
| ATOM | 659 | CE  | LYS | 1540 | -3.516 | -5.946  | 12.882 | 1.00 | 35.05 |
| ATOM | 660 | NZ  | LYS | 1540 | -2.959 | -4.850  | 13.733 | 1.00 | 39.81 |
| ATOM | 664 | C   | LYS | 1540 | 1.669  | -7.862  | 9.958  | 1.00 | 20.19 |
| ATOM | 665 | O   | LYS | 1540 | 1.671  | -8.738  | 9.099  | 1.00 | 21.80 |
| ATOM | 666 | N   | HIS | 1541 | 2.626  | -7.722  | 10.876 | 1.00 | 19.98 |
| ATOM | 668 | CA  | HIS | 1541 | 3.770  | -8.626  | 11.000 | 1.00 | 22.43 |
| ATOM | 669 | CB  | HIS | 1541 | 4.854  | -8.374  | 9.965  | 1.00 | 22.34 |
| ATOM | 670 | CG  | HIS | 1541 | 5.892  | -9.455  | 9.923  | 1.00 | 20.68 |
| ATOM | 671 | CD2 | HIS | 1541 | 5.906  | -10.654 | 9.295  | 1.00 | 20.60 |
| ATOM | 672 | ND1 | HIS | 1541 | 7.074  | -9.382  | 10.633 | 1.00 | 23.67 |
| ATOM | 674 | CE1 | HIS | 1541 | 7.771  | -10.490 | 10.444 | 1.00 | 23.35 |
| ATOM | 675 | NE2 | HIS | 1541 | 7.087  | -11.278 | 9.634  | 1.00 | 22.04 |
| ATOM | 677 | C   | HIS | 1541 | 4.385  | -8.477  | 12.376 | 1.00 | 27.21 |
| ATOM | 678 | O   | HIS | 1541 | 4.538  | -7.367  | 12.885 | 1.00 | 31.33 |
| ATOM | 679 | N   | LYS | 1542 | 4.726  | -9.619  | 12.958 | 1.00 | 29.25 |
| ATOM | 681 | CA  | LYS | 1542 | 5.319  | -9.698  | 14.285 | 1.00 | 30.39 |
| ATOM | 682 | CB  | LYS | 1542 | 5.660  | -11.151 | 14.610 | 1.00 | 33.76 |
| ATOM | 683 | CG  | LYS | 1542 | 6.232  | -11.370 | 15.994 | 1.00 | 42.16 |
| ATOM | 684 | CD  | LYS | 1542 | 6.400  | -12.833 | 16.230 | 1.00 | 49.69 |
| ATOM | 685 | CE  | LYS | 1542 | 7.040  | -13.499 | 14.988 | 1.00 | 57.71 |
| ATOM | 686 | NZ  | LYS | 1542 | 7.499  | -14.904 | 15.237 | 1.00 | 62.05 |
| ATOM | 690 | C   | LYS | 1542 | 6.515  | -8.808  | 14.462 | 1.00 | 27.21 |
| ATOM | 691 | O   | LYS | 1542 | 6.690  | -8.232  | 15.522 | 1.00 | 29.68 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 692 | N   | ASN | 1543 | 7.293  | -8.619  | 13.410 | 1.00 | 23.81 |
| ATOM | 694 | CA  | ASN | 1543 | 8.472  | -7.787  | 13.537 | 1.00 | 24.70 |
| ATOM | 695 | CB  | ASN | 1543 | 9.697  | -8.550  | 13.031 | 1.00 | 24.68 |
| ATOM | 696 | CG  | ASN | 1543 | 9.914  | -9.855  | 13.793 | 1.00 | 24.82 |
| ATOM | 697 | OD1 | ASN | 1543 | 9.734  | -10.942 | 13.239 | 1.00 | 27.33 |
| ATOM | 698 | ND2 | ASN | 1543 | 10.255 | -9.758  | 15.078 | 1.00 | 16.75 |
| ATOM | 701 | C   | ASN | 1543 | 8.444  | -6.326  | 13.032 | 1.00 | 24.93 |
| ATOM | 702 | O   | ASN | 1543 | 9.469  | -5.781  | 12.623 | 1.00 | 26.76 |
| ATOM | 703 | N   | ILE | 1544 | 7.276  | -5.692  | 13.088 | 1.00 | 24.21 |
| ATOM | 705 | CA  | ILE | 1544 | 7.121  | -4.281  | 12.710 | 1.00 | 21.87 |
| ATOM | 706 | CB  | ILE | 1544 | 6.626  | -4.095  | 11.240 | 1.00 | 23.23 |
| ATOM | 707 | CG2 | ILE | 1544 | 7.549  | -4.837  | 10.267 | 1.00 | 23.87 |
| ATOM | 708 | CG1 | ILE | 1544 | 5.182  | -4.580  | 11.063 | 1.00 | 22.57 |
| ATOM | 709 | CD1 | ILE | 1544 | 4.639  | -4.342  | 9.659  | 1.00 | 17.59 |
| ATOM | 710 | C   | ILE | 1544 | 6.122  | -3.656  | 13.696 | 1.00 | 21.64 |
| ATOM | 711 | O   | ILE | 1544 | 5.399  | -4.377  | 14.397 | 1.00 | 21.00 |
| ATOM | 712 | N   | ILE | 1545 | 6.167  | -2.340  | 13.856 | 1.00 | 21.59 |
| ATOM | 714 | CA  | ILE | 1545 | 5.214  | -1.687  | 14.746 | 1.00 | 24.05 |
| ATOM | 715 | CB  | ILE | 1545 | 5.641  | -0.242  | 15.138 | 1.00 | 23.68 |
| ATOM | 716 | CG2 | ILE | 1545 | 4.473  | 0.500   | 15.831 | 1.00 | 21.90 |
| ATOM | 717 | CG1 | ILE | 1545 | 6.880  | -0.284  | 16.050 | 1.00 | 21.94 |
| ATOM | 718 | CD1 | ILE | 1545 | 6.643  | -0.808  | 17.446 | 1.00 | 9.18  |
| ATOM | 719 | C   | ILE | 1545 | 3.914  | -1.641  | 13.955 | 1.00 | 25.08 |
| ATOM | 720 | O   | ILE | 1545 | 3.842  | -1.001  | 12.897 | 1.00 | 26.68 |
| ATOM | 721 | N   | ASN | 1546 | 2.909  | -2.358  | 14.455 | 1.00 | 25.88 |
| ATOM | 723 | CA  | ASN | 1546 | 1.602  | -2.424  | 13.800 | 1.00 | 24.61 |
| ATOM | 724 | CB  | ASN | 1546 | 0.944  | -3.793  | 14.005 | 1.00 | 23.18 |
| ATOM | 725 | CG  | ASN | 1546 | 1.759  | -4.923  | 13.434 | 1.00 | 21.54 |
| ATOM | 726 | OD1 | ASN | 1546 | 1.884  | -5.059  | 12.214 | 1.00 | 21.52 |
| ATOM | 727 | ND2 | ASN | 1546 | 2.319  | -5.748  | 14.313 | 1.00 | 18.83 |
| ATOM | 730 | C   | ASN | 1546 | 0.646  | -1.368  | 14.292 | 1.00 | 23.02 |
| ATOM | 731 | O   | ASN | 1546 | 0.739  | -0.911  | 15.429 | 1.00 | 25.66 |
| ATOM | 732 | N   | LEU | 1547 | -0.285 | -1.014  | 13.422 | 1.00 | 24.45 |
| ATOM | 734 | CA  | LEU | 1547 | -1.336 | -0.041  | 13.692 | 1.00 | 24.27 |
| ATOM | 735 | CB  | LEU | 1547 | -1.819 | 0.553   | 12.360 | 1.00 | 18.04 |
| ATOM | 736 | CG  | LEU | 1547 | -3.012 | 1.515   | 12.343 | 1.00 | 19.96 |
| ATOM | 737 | CD1 | LEU | 1547 | -2.630 | 2.928   | 12.842 | 1.00 | 10.60 |
| ATOM | 738 | CD2 | LEU | 1547 | -3.555 | 1.570   | 10.924 | 1.00 | 16.44 |
| ATOM | 739 | C   | LEU | 1547 | -2.469 | -0.826  | 14.384 | 1.00 | 26.95 |
| ATOM | 740 | O   | LEU | 1547 | -2.835 | -1.934  | 13.956 | 1.00 | 27.38 |
| ATOM | 741 | N   | LEU | 1548 | -2.998 | -0.260  | 15.460 | 1.00 | 26.61 |
| ATOM | 743 | CA  | LEU | 1548 | -4.063 | -0.902  | 16.222 | 1.00 | 26.25 |
| ATOM | 744 | CB  | LEU | 1548 | -3.717 | -0.951  | 17.721 | 1.00 | 22.48 |
| ATOM | 745 | CG  | LEU | 1548 | -2.370 | -1.553  | 18.117 | 1.00 | 20.24 |
| ATOM | 746 | CD1 | LEU | 1548 | -2.282 | -1.656  | 19.616 | 1.00 | 19.27 |
| ATOM | 747 | CD2 | LEU | 1548 | -2.175 | -2.929  | 17.492 | 1.00 | 19.23 |
| ATOM | 748 | C   | LEU | 1548 | -5.401 | -0.198  | 16.017 | 1.00 | 26.75 |
| ATOM | 749 | O   | LEU | 1548 | -6.447 | -0.837  | 16.036 | 1.00 | 25.56 |
| ATOM | 750 | N   | GLY | 1549 | -5.367 | 1.115   | 15.823 | 1.00 | 25.78 |
| ATOM | 752 | CA  | GLY | 1549 | -6.607 | 1.843   | 15.616 | 1.00 | 25.80 |
| ATOM | 753 | C   | GLY | 1549 | -6.319 | 3.324   | 15.490 | 1.00 | 27.76 |
| ATOM | 754 | O   | GLY | 1549 | -5.148 | 3.716   | 15.405 | 1.00 | 28.05 |

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|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 755 | N   | ALA | 1550 | -7.369  | 4.143  | 15.530 | 1.00 | 27.34 |
| ATOM | 757 | CA  | ALA | 1550 | -7.212  | 5.582  | 15.414 | 1.00 | 25.85 |
| ATOM | 758 | CB  | ALA | 1550 | -6.925  | 5.947  | 13.978 | 1.00 | 23.09 |
| ATOM | 759 | C   | ALA | 1550 | -8.430  | 6.353  | 15.897 | 1.00 | 26.58 |
| ATOM | 760 | O   | ALA | 1550 | -9.562  | 5.866  | 15.797 | 1.00 | 28.26 |
| ATOM | 761 | N   | CYS | 1551 | -8.182  | 7.551  | 16.429 | 1.00 | 26.30 |
| ATOM | 763 | CA  | CYS | 1551 | -9.227  | 8.471  | 16.899 | 1.00 | 28.29 |
| ATOM | 764 | CB  | CYS | 1551 | -8.966  | 8.952  | 18.342 | 1.00 | 27.12 |
| ATOM | 765 | SG  | CYS | 1551 | -9.101  | 7.681  | 19.630 | 1.00 | 27.09 |
| ATOM | 766 | C   | CYS | 1551 | -9.092  | 9.646  | 15.934 | 1.00 | 28.57 |
| ATOM | 767 | O   | CYS | 1551 | -8.156  | 10.436 | 16.044 | 1.00 | 26.80 |
| ATOM | 768 | N   | THR | 1552 | -9.966  | 9.699  | 14.933 | 1.00 | 29.27 |
| ATOM | 770 | CA  | THR | 1552 | -9.889  | 10.736 | 13.921 | 1.00 | 29.30 |
| ATOM | 771 | CB  | THR | 1552 | -9.779  | 10.110 | 12.495 | 1.00 | 27.19 |
| ATOM | 772 | OG1 | THR | 1552 | -10.978 | 9.393  | 12.191 | 1.00 | 26.68 |
| ATOM | 774 | CG2 | THR | 1552 | -8.629  | 9.133  | 12.414 | 1.00 | 27.00 |
| ATOM | 775 | C   | THR | 1552 | -11.045 | 11.716 | 13.905 | 1.00 | 29.86 |
| ATOM | 776 | O   | THR | 1552 | -10.918 | 12.838 | 13.403 | 1.00 | 30.69 |
| ATOM | 777 | N   | GLN | 1553 | -12.201 | 11.268 | 14.369 | 1.00 | 31.21 |
| ATOM | 779 | CA  | GLN | 1553 | -13.374 | 12.124 | 14.329 | 1.00 | 34.31 |
| ATOM | 780 | CB  | GLN | 1553 | -14.641 | 11.279 | 14.147 | 1.00 | 33.00 |
| ATOM | 781 | CG  | GLN | 1553 | -14.714 | 10.530 | 12.820 | 1.00 | 34.68 |
| ATOM | 782 | CD  | GLN | 1553 | -14.584 | 11.453 | 11.617 | 1.00 | 39.26 |
| ATOM | 783 | OE1 | GLN | 1553 | -15.300 | 12.449 | 11.506 | 1.00 | 43.55 |
| ATOM | 784 | NE2 | GLN | 1553 | -13.668 | 11.129 | 10.718 | 1.00 | 37.56 |
| ATOM | 787 | C   | GLN | 1553 | -13.502 | 13.040 | 15.526 | 1.00 | 36.86 |
| ATOM | 788 | O   | GLN | 1553 | -13.030 | 12.714 | 16.613 | 1.00 | 34.88 |
| ATOM | 789 | N   | ASP | 1554 | -14.122 | 14.195 | 15.290 | 1.00 | 40.73 |
| ATOM | 791 | CA  | ASP | 1554 | -14.369 | 15.202 | 16.313 | 1.00 | 42.49 |
| ATOM | 792 | CB  | ASP | 1554 | -15.693 | 14.913 | 17.028 | 1.00 | 46.26 |
| ATOM | 793 | CG  | ASP | 1554 | -16.907 | 15.174 | 16.153 | 1.00 | 51.14 |
| ATOM | 794 | OD1 | ASP | 1554 | -17.686 | 16.097 | 16.488 | 1.00 | 57.62 |
| ATOM | 795 | OD2 | ASP | 1554 | -17.092 | 14.463 | 15.146 | 1.00 | 55.72 |
| ATOM | 796 | C   | ASP | 1554 | -13.249 | 15.299 | 17.336 | 1.00 | 42.31 |
| ATOM | 797 | O   | ASP | 1554 | -13.443 | 14.955 | 18.501 | 1.00 | 43.61 |
| ATOM | 798 | N   | GLY | 1555 | -12.077 | 15.753 | 16.902 | 1.00 | 41.03 |
| ATOM | 800 | CA  | GLY | 1555 | -10.960 | 15.864 | 17.823 | 1.00 | 37.98 |
| ATOM | 801 | C   | GLY | 1555 | -9.605  | 15.674 | 17.167 | 1.00 | 38.30 |
| ATOM | 802 | O   | GLY | 1555 | -9.533  | 15.478 | 15.953 | 1.00 | 37.28 |
| ATOM | 803 | N   | PRO | 1556 | -8.511  | 15.693 | 17.961 | 1.00 | 37.62 |
| ATOM | 804 | CD  | PRO | 1556 | -8.575  | 15.755 | 19.429 | 1.00 | 37.23 |
| ATOM | 805 | CA  | PRO | 1556 | -7.123  | 15.533 | 17.500 | 1.00 | 33.79 |
| ATOM | 806 | CB  | PRO | 1556 | -6.296  | 15.748 | 18.773 | 1.00 | 33.33 |
| ATOM | 807 | CG  | PRO | 1556 | -7.254  | 16.353 | 19.770 | 1.00 | 36.99 |
| ATOM | 808 | C   | PRO | 1556 | -6.891  | 14.134 | 16.990 | 1.00 | 33.57 |
| ATOM | 809 | O   | PRO | 1556 | -7.378  | 13.175 | 17.568 | 1.00 | 32.10 |
| ATOM | 810 | N   | LEU | 1557 | -6.168  | 14.031 | 15.884 | 1.00 | 33.23 |
| ATOM | 812 | CA  | LEU | 1557 | -5.859  | 12.745 | 15.300 | 1.00 | 34.20 |
| ATOM | 813 | CB  | LEU | 1557 | -5.173  | 12.950 | 13.944 | 1.00 | 32.88 |
| ATOM | 814 | CG  | LEU | 1557 | -4.674  | 11.716 | 13.183 | 1.00 | 29.78 |
| ATOM | 815 | CD1 | LEU | 1557 | -5.810  | 10.730 | 12.943 | 1.00 | 29.22 |
| ATOM | 816 | CD2 | LEU | 1557 | -4.085  | 12.161 | 11.880 | 1.00 | 28.17 |

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|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 817 | C   | LEU | 1557 | -4.950 | 11.927 | 16.225 | 1.00 | 36.29 |
| ATOM | 818 | O   | LEU | 1557 | -3.847 | 12.365 | 16.580 | 1.00 | 37.50 |
| ATOM | 819 | N   | TYR | 1558 | -5.427 | 10.765 | 16.658 | 1.00 | 35.35 |
| ATOM | 821 | CA  | TYR | 1558 | -4.619 | 9.890  | 17.495 | 1.00 | 33.09 |
| ATOM | 822 | CB  | TYR | 1558 | -5.323 | 9.516  | 18.805 | 1.00 | 34.16 |
| ATOM | 823 | CG  | TYR | 1558 | -5.363 | 10.629 | 19.806 | 1.00 | 24.40 |
| ATOM | 824 | CD1 | TYR | 1558 | -6.364 | 10.688 | 20.771 | 1.00 | 33.23 |
| ATOM | 825 | CE1 | TYR | 1558 | -6.438 | 11.747 | 21.663 | 1.00 | 34.52 |
| ATOM | 826 | CD2 | TYR | 1558 | -4.426 | 11.655 | 19.757 | 1.00 | 37.30 |
| ATOM | 827 | CE2 | TYR | 1558 | -4.488 | 12.715 | 20.640 | 1.00 | 38.44 |
| ATOM | 828 | CZ  | TYR | 1558 | -5.494 | 12.762 | 21.587 | 1.00 | 36.17 |
| ATOM | 829 | OH  | TYR | 1558 | -5.561 | 13.848 | 22.431 | 1.00 | 34.28 |
| ATOM | 831 | C   | TYR | 1558 | -4.379 | 8.627  | 16.700 | 1.00 | 31.12 |
| ATOM | 832 | O   | TYR | 1558 | -5.329 | 7.980  | 16.255 | 1.00 | 29.83 |
| ATOM | 833 | N   | VAL | 1559 | -3.109 | 8.321  | 16.468 | 1.00 | 29.60 |
| ATOM | 835 | CA  | VAL | 1559 | -2.727 | 7.115  | 15.753 | 1.00 | 27.08 |
| ATOM | 836 | CB  | VAL | 1559 | -1.647 | 7.420  | 14.704 | 1.00 | 24.96 |
| ATOM | 837 | CG1 | VAL | 1559 | -1.281 | 6.149  | 13.926 | 1.00 | 24.36 |
| ATOM | 838 | CG2 | VAL | 1559 | -2.147 | 8.525  | 13.765 | 1.00 | 19.21 |
| ATOM | 839 | C   | VAL | 1559 | -2.238 | 6.102  | 16.794 | 1.00 | 25.65 |
| ATOM | 840 | O   | VAL | 1559 | -1.169 | 6.257  | 17.389 | 1.00 | 24.97 |
| ATOM | 841 | N   | ILE | 1560 | -3.067 | 5.095  | 17.046 | 1.00 | 25.91 |
| ATOM | 843 | CA  | ILE | 1560 | -2.777 | 4.062  | 18.042 | 1.00 | 26.94 |
| ATOM | 844 | CB  | ILE | 1560 | -4.081 | 3.530  | 18.637 | 1.00 | 24.89 |
| ATOM | 845 | CG2 | ILE | 1560 | -3.785 | 2.744  | 19.900 | 1.00 | 17.89 |
| ATOM | 846 | CG1 | ILE | 1560 | -5.028 | 4.707  | 18.907 | 1.00 | 22.84 |
| ATOM | 847 | CD1 | ILE | 1560 | -6.450 | 4.304  | 19.163 | 1.00 | 22.51 |
| ATOM | 848 | C   | ILE | 1560 | -1.955 | 2.896  | 17.467 | 1.00 | 30.61 |
| ATOM | 849 | O   | ILE | 1560 | -2.445 | 2.111  | 16.636 | 1.00 | 31.41 |
| ATOM | 850 | N   | VAL | 1561 | -0.698 | 2.811  | 17.890 | 1.00 | 30.26 |
| ATOM | 852 | CA  | VAL | 1561 | 0.222  | 1.779  | 17.429 | 1.00 | 29.39 |
| ATOM | 853 | CB  | VAL | 1561 | 1.466  | 2.437  | 16.730 | 1.00 | 30.18 |
| ATOM | 854 | CG1 | VAL | 1561 | 1.030  | 3.188  | 15.475 | 1.00 | 20.60 |
| ATOM | 855 | CG2 | VAL | 1561 | 2.148  | 3.415  | 17.675 | 1.00 | 32.91 |
| ATOM | 856 | C   | VAL | 1561 | 0.662  | 0.870  | 18.588 | 1.00 | 27.40 |
| ATOM | 857 | O   | VAL | 1561 | 0.323  | 1.128  | 19.742 | 1.00 | 29.33 |
| ATOM | 858 | N   | GLU | 1562 | 1.381  | -0.209 | 18.279 | 1.00 | 24.75 |
| ATOM | 860 | CA  | GLU | 1562 | 1.852  | -1.142 | 19.308 | 1.00 | 22.64 |
| ATOM | 861 | CB  | GLU | 1562 | 2.426  | -2.410 | 18.676 | 1.00 | 17.97 |
| ATOM | 862 | CG  | GLU | 1562 | 1.365  | -3.282 | 18.029 | 1.00 | 24.33 |
| ATOM | 863 | CD  | GLU | 1562 | 1.909  | -4.552 | 17.383 | 1.00 | 26.80 |
| ATOM | 864 | OE1 | GLU | 1562 | 1.247  | -5.592 | 17.507 | 1.00 | 33.32 |
| ATOM | 865 | OE2 | GLU | 1562 | 2.974  | -4.538 | 16.722 | 1.00 | 25.62 |
| ATOM | 866 | C   | GLU | 1562 | 2.885  | -0.534 | 20.259 | 1.00 | 25.09 |
| ATOM | 867 | O   | GLU | 1562 | 3.638  | 0.355  | 19.899 | 1.00 | 23.82 |
| ATOM | 868 | N   | TYR | 1563 | 2.897  | -1.023 | 21.491 | 1.00 | 28.01 |
| ATOM | 870 | CA  | TYR | 1563 | 3.805  | -0.539 | 22.512 | 1.00 | 26.93 |
| ATOM | 871 | CB  | TYR | 1563 | 3.045  | -0.428 | 23.829 | 1.00 | 27.19 |
| ATOM | 872 | CG  | TYR | 1563 | 3.868  | 0.008  | 25.009 | 1.00 | 27.72 |
| ATOM | 873 | CD1 | TYR | 1563 | 4.581  | 1.196  | 24.976 | 1.00 | 30.61 |
| ATOM | 874 | CE1 | TYR | 1563 | 5.303  | 1.620  | 26.069 | 1.00 | 33.05 |
| ATOM | 875 | CD2 | TYR | 1563 | 3.908  | -0.753 | 26.176 | 1.00 | 25.77 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 876 | CE2 | TYR | 1563 | 4.626  | -0.344 | 27.267 | 1.00 | 26.81 |
| ATOM | 877 | CZ  | TYR | 1563 | 5.329  | 0.845  | 27.210 | 1.00 | 32.81 |
| ATOM | 878 | OH  | TYR | 1563 | 6.091  | 1.271  | 28.276 | 1.00 | 40.16 |
| ATOM | 880 | C   | TYR | 1563 | 4.989  | -1.487 | 22.675 | 1.00 | 28.73 |
| ATOM | 881 | O   | TYR | 1563 | 4.815  | -2.704 | 22.735 | 1.00 | 27.05 |
| ATOM | 882 | N   | ALA | 1564 | 6.189  | -0.908 | 22.743 | 1.00 | 29.89 |
| ATOM | 884 | CA  | ALA | 1564 | 7.453  | -1.634 | 22.916 | 1.00 | 28.50 |
| ATOM | 885 | CB  | ALA | 1564 | 8.392  | -1.349 | 21.721 | 1.00 | 27.54 |
| ATOM | 886 | C   | ALA | 1564 | 8.036  | -1.092 | 24.229 | 1.00 | 27.05 |
| ATOM | 887 | O   | ALA | 1564 | 8.790  | -0.129 | 24.249 | 1.00 | 31.20 |
| ATOM | 888 | N   | SER | 1565 | 7.650  | -1.706 | 25.333 | 1.00 | 27.11 |
| ATOM | 890 | CA  | SER | 1565 | 8.062  | -1.251 | 26.652 | 1.00 | 28.91 |
| ATOM | 891 | CB  | SER | 1565 | 7.501  | -2.152 | 27.729 | 1.00 | 27.33 |
| ATOM | 892 | OG  | SER | 1565 | 8.108  | -3.419 | 27.650 | 1.00 | 26.58 |
| ATOM | 894 | C   | SER | 1565 | 9.530  | -1.085 | 26.915 | 1.00 | 30.19 |
| ATOM | 895 | O   | SER | 1565 | 9.897  | -0.330 | 27.810 | 1.00 | 33.44 |
| ATOM | 896 | N   | LYS | 1566 | 10.368 | -1.801 | 26.178 | 1.00 | 30.99 |
| ATOM | 898 | CA  | LYS | 1566 | 11.798 | -1.708 | 26.410 | 1.00 | 30.50 |
| ATOM | 899 | CB  | LYS | 1566 | 12.452 | -3.082 | 26.335 | 1.00 | 30.38 |
| ATOM | 900 | CG  | LYS | 1566 | 12.037 | -3.943 | 27.507 | 1.00 | 27.83 |
| ATOM | 901 | CD  | LYS | 1566 | 12.605 | -5.339 | 27.457 | 1.00 | 32.36 |
| ATOM | 902 | CE  | LYS | 1566 | 12.345 | -6.024 | 28.784 | 1.00 | 30.57 |
| ATOM | 903 | NZ  | LYS | 1566 | 12.651 | -7.460 | 28.722 | 1.00 | 34.82 |
| ATOM | 907 | C   | LYS | 1566 | 12.526 | -0.678 | 25.573 | 1.00 | 30.39 |
| ATOM | 908 | O   | LYS | 1566 | 13.755 | -0.567 | 25.640 | 1.00 | 32.53 |
| ATOM | 909 | N   | GLY | 1567 | 11.753 | 0.127  | 24.851 | 1.00 | 29.45 |
| ATOM | 911 | CA  | GLY | 1567 | 12.319 | 1.184  | 24.035 | 1.00 | 29.17 |
| ATOM | 912 | C   | GLY | 1567 | 13.079 | 0.742  | 22.806 | 1.00 | 28.14 |
| ATOM | 913 | O   | GLY | 1567 | 12.875 | -0.364 | 22.324 | 1.00 | 27.70 |
| ATOM | 914 | N   | ASN | 1568 | 13.975 | 1.601  | 22.320 | 1.00 | 29.48 |
| ATOM | 916 | CA  | ASN | 1568 | 14.754 | 1.308  | 21.121 | 1.00 | 30.00 |
| ATOM | 917 | CB  | ASN | 1568 | 15.271 | 2.591  | 20.464 | 1.00 | 28.53 |
| ATOM | 918 | CG  | ASN | 1568 | 16.342 | 3.285  | 21.281 | 1.00 | 30.13 |
| ATOM | 919 | OD1 | ASN | 1568 | 17.305 | 2.670  | 21.730 | 1.00 | 31.50 |
| ATOM | 920 | ND2 | ASN | 1568 | 16.212 | 4.591  | 21.420 | 1.00 | 30.91 |
| ATOM | 923 | C   | ASN | 1568 | 15.892 | 0.333  | 21.352 | 1.00 | 28.83 |
| ATOM | 924 | O   | ASN | 1568 | 16.371 | 0.201  | 22.472 | 1.00 | 29.87 |
| ATOM | 925 | N   | LEU | 1569 | 16.346 | -0.300 | 20.274 | 1.00 | 27.43 |
| ATOM | 927 | CA  | LEU | 1569 | 17.417 | -1.291 | 20.323 | 1.00 | 29.95 |
| ATOM | 928 | CB  | LEU | 1569 | 17.511 | -2.022 | 18.972 | 1.00 | 28.96 |
| ATOM | 929 | CG  | LEU | 1569 | 18.508 | -3.173 | 18.797 | 1.00 | 30.82 |
| ATOM | 930 | CD1 | LEU | 1569 | 18.431 | -4.211 | 19.939 | 1.00 | 28.31 |
| ATOM | 931 | CD2 | LEU | 1569 | 18.244 | -3.819 | 17.461 | 1.00 | 25.70 |
| ATOM | 932 | C   | LEU | 1569 | 18.805 | -0.779 | 20.754 | 1.00 | 29.74 |
| ATOM | 933 | O   | LEU | 1569 | 19.530 | -1.484 | 21.447 | 1.00 | 28.35 |
| ATOM | 934 | N   | ARG | 1570 | 19.179 | 0.427  | 20.341 | 1.00 | 31.42 |
| ATOM | 936 | CA  | ARG | 1570 | 20.485 | 0.985  | 20.703 | 1.00 | 32.81 |
| ATOM | 937 | CB  | ARG | 1570 | 20.639 | 2.395  | 20.115 | 1.00 | 31.01 |
| ATOM | 938 | CG  | ARG | 1570 | 21.922 | 3.091  | 20.543 | 1.00 | 35.33 |
| ATOM | 939 | CD  | ARG | 1570 | 21.918 | 4.581  | 20.212 | 1.00 | 38.30 |
| ATOM | 940 | NE  | ARG | 1570 | 20.700 | 5.272  | 20.649 | 1.00 | 47.77 |
| ATOM | 942 | CZ  | ARG | 1570 | 20.393 | 5.595  | 21.912 | 1.00 | 53.56 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 943  | NH1 | ARG | 1570 | 21.212 | 5.304  | 22.931 | 1.00 | 51.30 |
| ATOM | 946  | NH2 | ARG | 1570 | 19.245 | 6.223  | 22.161 | 1.00 | 51.34 |
| ATOM | 949  | C   | ARG | 1570 | 20.620 | 1.034  | 22.230 | 1.00 | 35.61 |
| ATOM | 950  | O   | ARG | 1570 | 21.548 | 0.455  | 22.814 | 1.00 | 34.40 |
| ATOM | 951  | N   | GLU | 1571 | 19.677 | 1.724  | 22.863 | 1.00 | 36.79 |
| ATOM | 953  | CA  | GLU | 1571 | 19.637 | 1.855  | 24.311 | 1.00 | 37.35 |
| ATOM | 954  | CB  | GLU | 1571 | 18.403 | 2.662  | 24.725 | 1.00 | 41.36 |
| ATOM | 955  | CG  | GLU | 1571 | 18.407 | 4.118  | 24.267 | 1.00 | 49.97 |
| ATOM | 956  | CD  | GLU | 1571 | 17.048 | 4.823  | 24.459 | 1.00 | 59.14 |
| ATOM | 957  | OE1 | GLU | 1571 | 15.991 | 4.133  | 24.595 | 1.00 | 59.21 |
| ATOM | 958  | OE2 | GLU | 1571 | 17.043 | 6.081  | 24.446 | 1.00 | 59.41 |
| ATOM | 959  | C   | GLU | 1571 | 19.593 | 0.459  | 24.948 | 1.00 | 37.09 |
| ATOM | 960  | O   | GLU | 1571 | 20.327 | 0.172  | 25.892 | 1.00 | 37.70 |
| ATOM | 961  | N   | TYR | 1572 | 18.750 | -0.405 | 24.400 | 1.00 | 35.08 |
| ATOM | 963  | CA  | TYR | 1572 | 18.591 | -1.766 | 24.878 | 1.00 | 32.72 |
| ATOM | 964  | CB  | TYR | 1572 | 17.571 | -2.499 | 23.995 | 1.00 | 31.62 |
| ATOM | 965  | CG  | TYR | 1572 | 17.376 | -3.973 | 24.309 | 1.00 | 25.69 |
| ATOM | 966  | CD1 | TYR | 1572 | 16.392 | -4.378 | 25.187 | 1.00 | 27.87 |
| ATOM | 967  | CE1 | TYR | 1572 | 16.180 | -5.711 | 25.458 | 1.00 | 28.57 |
| ATOM | 968  | CD2 | TYR | 1572 | 18.151 | -4.941 | 23.703 | 1.00 | 22.18 |
| ATOM | 969  | CE2 | TYR | 1572 | 17.948 | -6.284 | 23.969 | 1.00 | 25.06 |
| ATOM | 970  | CZ  | TYR | 1572 | 16.954 | -6.659 | 24.852 | 1.00 | 25.65 |
| ATOM | 971  | OH  | TYR | 1572 | 16.732 | -7.985 | 25.143 | 1.00 | 25.29 |
| ATOM | 973  | C   | TYR | 1572 | 19.904 | -2.525 | 24.871 | 1.00 | 34.57 |
| ATOM | 974  | O   | TYR | 1572 | 20.186 | -3.309 | 25.796 | 1.00 | 35.05 |
| ATOM | 975  | N   | LEU | 1573 | 20.692 | -2.338 | 23.812 | 1.00 | 33.34 |
| ATOM | 977  | CA  | LEU | 1573 | 21.970 | -3.033 | 23.712 | 1.00 | 33.00 |
| ATOM | 978  | CB  | LEU | 1573 | 22.487 | -3.018 | 22.273 | 1.00 | 29.86 |
| ATOM | 979  | CG  | LEU | 1573 | 21.833 | -3.888 | 21.198 | 1.00 | 23.37 |
| ATOM | 980  | CD1 | LEU | 1573 | 22.339 | -3.448 | 19.840 | 1.00 | 16.57 |
| ATOM | 981  | CD2 | LEU | 1573 | 22.129 | -5.354 | 21.426 | 1.00 | 20.31 |
| ATOM | 982  | C   | LEU | 1573 | 22.997 | -2.417 | 24.655 | 1.00 | 36.57 |
| ATOM | 983  | O   | LEU | 1573 | 23.752 | -3.134 | 25.311 | 1.00 | 39.00 |
| ATOM | 984  | N   | GLN | 1574 | 23.003 | -1.090 | 24.735 | 1.00 | 37.26 |
| ATOM | 986  | CA  | GLN | 1574 | 23.942 | -0.399 | 25.608 | 1.00 | 37.50 |
| ATOM | 987  | CB  | GLN | 1574 | 23.844 | 1.110  | 25.394 | 1.00 | 36.96 |
| ATOM | 988  | CG  | GLN | 1574 | 24.526 | 1.582  | 24.113 | 1.00 | 39.10 |
| ATOM | 989  | CD  | GLN | 1574 | 24.289 | 3.054  | 23.801 | 1.00 | 40.63 |
| ATOM | 990  | OE1 | GLN | 1574 | 23.697 | 3.796  | 24.595 | 1.00 | 38.68 |
| ATOM | 991  | NE2 | GLN | 1574 | 24.736 | 3.480  | 22.625 | 1.00 | 38.62 |
| ATOM | 994  | C   | GLN | 1574 | 23.687 | -0.759 | 27.073 | 1.00 | 38.27 |
| ATOM | 995  | O   | GLN | 1574 | 24.600 | -1.144 | 27.801 | 1.00 | 39.43 |
| ATOM | 996  | N   | ALA | 1575 | 22.422 | -0.731 | 27.469 | 1.00 | 38.80 |
| ATOM | 998  | CA  | ALA | 1575 | 22.021 | -1.044 | 28.831 | 1.00 | 39.51 |
| ATOM | 999  | CB  | ALA | 1575 | 20.551 | -0.714 | 29.024 | 1.00 | 36.89 |
| ATOM | 1000 | C   | ALA | 1575 | 22.304 | -2.484 | 29.275 | 1.00 | 40.89 |
| ATOM | 1001 | O   | ALA | 1575 | 22.006 | -2.842 | 30.417 | 1.00 | 44.53 |
| ATOM | 1002 | N   | ARG | 1576 | 22.857 | -3.317 | 28.395 | 1.00 | 39.11 |
| ATOM | 1004 | CA  | ARG | 1576 | 23.148 | -4.703 | 28.768 | 1.00 | 38.24 |
| ATOM | 1005 | CB  | ARG | 1576 | 22.234 | -5.669 | 28.019 | 1.00 | 38.42 |
| ATOM | 1006 | CG  | ARG | 1576 | 20.794 | -5.518 | 28.472 | 1.00 | 39.73 |
| ATOM | 1007 | CD  | ARG | 1576 | 19.838 | -6.352 | 27.687 | 1.00 | 37.87 |



|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1008 | NE  | ARG | 1576 | 18.489 | -6.260  | 28.235 | 1.00 | 41.03 |
| ATOM | 1010 | CZ  | ARG | 1576 | 17.830 | -5.123  | 28.436 | 1.00 | 43.27 |
| ATOM | 1011 | NH1 | ARG | 1576 | 18.399 | -3.961  | 28.143 | 1.00 | 42.64 |
| ATOM | 1014 | NH2 | ARG | 1576 | 16.573 | -5.152  | 28.877 | 1.00 | 46.13 |
| ATOM | 1017 | C   | ARG | 1576 | 24.604 | -5.076  | 28.612 | 1.00 | 39.77 |
| ATOM | 1018 | O   | ARG | 1576 | 24.978 | -6.256  | 28.623 | 1.00 | 40.25 |
| ATOM | 1019 | N   | ARG | 1577 | 25.428 | -4.042  | 28.501 | 1.00 | 40.39 |
| ATOM | 1021 | CA  | ARG | 1577 | 26.866 | -4.194  | 28.388 | 1.00 | 40.42 |
| ATOM | 1022 | CB  | ARG | 1577 | 27.485 | -2.871  | 27.952 | 1.00 | 37.67 |
| ATOM | 1023 | CG  | ARG | 1577 | 27.247 | -2.477  | 26.526 | 1.00 | 36.22 |
| ATOM | 1024 | CD  | ARG | 1577 | 27.857 | -1.113  | 26.287 | 1.00 | 35.55 |
| ATOM | 1025 | NE  | ARG | 1577 | 27.971 | -0.797  | 24.866 | 1.00 | 38.72 |
| ATOM | 1027 | CZ  | ARG | 1577 | 28.395 | 0.369   | 24.384 | 1.00 | 37.57 |
| ATOM | 1028 | NH1 | ARG | 1577 | 28.754 | 1.352   | 25.205 | 1.00 | 37.49 |
| ATOM | 1031 | NH2 | ARG | 1577 | 28.449 | 0.562   | 23.074 | 1.00 | 39.58 |
| ATOM | 1034 | C   | ARG | 1577 | 27.449 | -4.548  | 29.760 | 1.00 | 42.45 |
| ATOM | 1035 | O   | ARG | 1577 | 26.878 | -4.180  | 30.801 | 1.00 | 42.57 |
| ATOM | 1036 | N   | PRO | 1578 | 28.564 | -5.296  | 29.797 | 1.00 | 43.36 |
| ATOM | 1037 | CD  | PRO | 1578 | 29.270 | -5.985  | 28.692 | 1.00 | 42.43 |
| ATOM | 1038 | CA  | PRO | 1578 | 29.159 | -5.648  | 31.082 | 1.00 | 43.08 |
| ATOM | 1039 | CB  | PRO | 1578 | 30.225 | -6.676  | 30.709 | 1.00 | 40.33 |
| ATOM | 1040 | CG  | PRO | 1578 | 30.600 | -6.300  | 29.331 | 1.00 | 40.71 |
| ATOM | 1041 | C   | PRO | 1578 | 29.768 | -4.373  | 31.666 | 1.00 | 42.44 |
| ATOM | 1042 | O   | PRO | 1578 | 30.261 | -3.525  | 30.922 | 1.00 | 41.24 |
| ATOM | 1043 | N   | PRO | 1579 | 29.705 | -4.205  | 32.993 | 1.00 | 44.57 |
| ATOM | 1044 | CD  | PRO | 1579 | 29.169 | -5.143  | 33.994 | 1.00 | 46.68 |
| ATOM | 1045 | CA  | PRO | 1579 | 30.251 | -3.017  | 33.654 | 1.00 | 44.89 |
| ATOM | 1046 | CB  | PRO | 1579 | 30.088 | -3.356  | 35.134 | 1.00 | 45.31 |
| ATOM | 1047 | CG  | PRO | 1579 | 28.865 | -4.224  | 35.142 | 1.00 | 44.45 |
| ATOM | 1048 | C   | PRO | 1579 | 31.711 | -2.767  | 33.289 | 1.00 | 45.17 |
| ATOM | 1049 | O   | PRO | 1579 | 32.620 | -3.257  | 33.953 | 1.00 | 47.72 |
| ATOM | 1050 | N   | ALA | 1592 | 19.075 | -5.384  | 32.475 | 1.00 | 49.23 |
| ATOM | 1052 | CA  | ALA | 1592 | 20.500 | -5.078  | 32.354 | 1.00 | 50.33 |
| ATOM | 1053 | CB  | ALA | 1592 | 20.954 | -4.184  | 33.503 | 1.00 | 51.83 |
| ATOM | 1054 | C   | ALA | 1592 | 21.412 | -6.308  | 32.251 | 1.00 | 50.65 |
| ATOM | 1055 | O   | ALA | 1592 | 22.621 | -6.166  | 32.044 | 1.00 | 51.55 |
| ATOM | 1056 | N   | ALA | 1593 | 20.849 | -7.505  | 32.409 | 1.00 | 49.06 |
| ATOM | 1058 | CA  | ALA | 1593 | 21.638 | -8.735  | 32.294 | 1.00 | 48.07 |
| ATOM | 1059 | CB  | ALA | 1593 | 20.773 | -9.953  | 32.579 | 1.00 | 47.87 |
| ATOM | 1060 | C   | ALA | 1593 | 22.258 | -8.840  | 30.891 | 1.00 | 47.59 |
| ATOM | 1061 | O   | ALA | 1593 | 21.664 | -8.426  | 29.894 | 1.00 | 49.09 |
| ATOM | 1062 | N   | GLN | 1594 | 23.465 | -9.388  | 30.830 | 1.00 | 47.30 |
| ATOM | 1064 | CA  | GLN | 1594 | 24.186 | -9.553  | 29.569 | 1.00 | 45.32 |
| ATOM | 1065 | CB  | GLN | 1594 | 25.576 | -10.118 | 29.837 | 1.00 | 44.82 |
| ATOM | 1066 | CG  | GLN | 1594 | 26.523 | -9.166  | 30.542 | 1.00 | 49.34 |
| ATOM | 1067 | CD  | GLN | 1594 | 27.751 | -9.877  | 31.111 | 1.00 | 52.40 |
| ATOM | 1068 | OE1 | GLN | 1594 | 28.264 | -10.847 | 30.537 | 1.00 | 51.16 |
| ATOM | 1069 | NE2 | GLN | 1594 | 28.209 | -9.408  | 32.265 | 1.00 | 54.00 |
| ATOM | 1072 | C   | GLN | 1594 | 23.474 | -10.432 | 28.539 | 1.00 | 45.00 |
| ATOM | 1073 | O   | GLN | 1594 | 22.780 | -11.393 | 28.876 | 1.00 | 45.28 |
| ATOM | 1074 | N   | LEU | 1595 | 23.684 | -10.104 | 27.273 | 1.00 | 45.08 |
| ATOM | 1076 | CA  | LEU | 1595 | 23.084 | -10.828 | 26.169 | 1.00 | 44.65 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1077 | CB  | LEU | 1595 | 22.758 | -9.864  | 25.023 | 1.00 | 43.08 |
| ATOM | 1078 | CG  | LEU | 1595 | 21.619 | -8.877  | 25.295 | 1.00 | 43.22 |
| ATOM | 1079 | CD1 | LEU | 1595 | 21.855 | -7.563  | 24.564 | 1.00 | 41.25 |
| ATOM | 1080 | CD2 | LEU | 1595 | 20.276 | -9.510  | 24.918 | 1.00 | 41.96 |
| ATOM | 1081 | C   | LEU | 1595 | 24.044 | -11.885 | 25.685 | 1.00 | 44.58 |
| ATOM | 1082 | O   | LEU | 1595 | 25.252 | -11.661 | 25.632 | 1.00 | 44.62 |
| ATOM | 1083 | N   | SER | 1596 | 23.511 | -13.058 | 25.376 | 1.00 | 45.71 |
| ATOM | 1085 | CA  | SER | 1596 | 24.325 | -14.151 | 24.868 | 1.00 | 45.30 |
| ATOM | 1086 | CB  | SER | 1596 | 23.633 | -15.495 | 25.124 | 1.00 | 46.19 |
| ATOM | 1087 | OG  | SER | 1596 | 22.401 | -15.605 | 24.432 | 1.00 | 44.03 |
| ATOM | 1089 | C   | SER | 1596 | 24.557 | -13.968 | 23.366 | 1.00 | 45.09 |
| ATOM | 1090 | O   | SER | 1596 | 23.891 | -13.156 | 22.707 | 1.00 | 45.03 |
| ATOM | 1091 | N   | SER | 1597 | 25.475 | -14.756 | 22.823 | 1.00 | 44.55 |
| ATOM | 1093 | CA  | SER | 1597 | 25.782 | -14.690 | 21.407 | 1.00 | 45.00 |
| ATOM | 1094 | CB  | SER | 1597 | 26.921 | -15.643 | 21.065 | 1.00 | 45.60 |
| ATOM | 1095 | OG  | SER | 1597 | 27.976 | -15.516 | 22.007 | 1.00 | 54.80 |
| ATOM | 1097 | C   | SER | 1597 | 24.526 | -15.076 | 20.633 | 1.00 | 43.92 |
| ATOM | 1098 | O   | SER | 1597 | 24.233 | -14.498 | 19.577 | 1.00 | 45.51 |
| ATOM | 1099 | N   | LYS | 1598 | 23.767 | -16.025 | 21.178 | 1.00 | 39.36 |
| ATOM | 1101 | CA  | LYS | 1598 | 22.551 | -16.454 | 20.519 | 1.00 | 36.56 |
| ATOM | 1102 | CB  | LYS | 1598 | 21.978 | -17.715 | 21.147 | 1.00 | 34.93 |
| ATOM | 1103 | CG  | LYS | 1598 | 21.374 | -18.643 | 20.101 | 1.00 | 37.52 |
| ATOM | 1104 | CD  | LYS | 1598 | 20.450 | -19.665 | 20.706 | 1.00 | 34.85 |
| ATOM | 1105 | CE  | LYS | 1598 | 20.054 | -20.709 | 19.702 | 1.00 | 30.95 |
| ATOM | 1106 | NZ  | LYS | 1598 | 21.219 | -21.551 | 19.334 | 1.00 | 30.59 |
| ATOM | 1110 | C   | LYS | 1598 | 21.521 | -15.336 | 20.552 | 1.00 | 36.21 |
| ATOM | 1111 | O   | LYS | 1598 | 20.840 | -15.099 | 19.548 | 1.00 | 36.39 |
| ATOM | 1112 | N   | ASP | 1599 | 21.447 | -14.624 | 21.681 | 1.00 | 33.57 |
| ATOM | 1114 | CA  | ASP | 1599 | 20.520 | -13.508 | 21.841 | 1.00 | 31.94 |
| ATOM | 1115 | CB  | ASP | 1599 | 20.635 | -12.898 | 23.238 | 1.00 | 33.82 |
| ATOM | 1116 | CG  | ASP | 1599 | 20.143 | -13.838 | 24.339 | 1.00 | 38.08 |
| ATOM | 1117 | OD1 | ASP | 1599 | 20.659 | -13.717 | 25.475 | 1.00 | 37.52 |
| ATOM | 1118 | OD2 | ASP | 1599 | 19.256 | -14.691 | 24.072 | 1.00 | 36.17 |
| ATOM | 1119 | C   | ASP | 1599 | 20.777 | -12.430 | 20.802 | 1.00 | 30.89 |
| ATOM | 1120 | O   | ASP | 1599 | 19.846 | -11.945 | 20.153 | 1.00 | 30.88 |
| ATOM | 1121 | N   | LEU | 1600 | 22.046 | -12.070 | 20.636 | 1.00 | 31.39 |
| ATOM | 1123 | CA  | LEU | 1600 | 22.439 | -11.050 | 19.666 | 1.00 | 31.55 |
| ATOM | 1124 | CB  | LEU | 1600 | 23.921 | -10.695 | 19.845 | 1.00 | 30.47 |
| ATOM | 1125 | CG  | LEU | 1600 | 24.341 | -10.072 | 21.190 | 1.00 | 29.24 |
| ATOM | 1126 | CD1 | LEU | 1600 | 25.857 | -9.923  | 21.226 | 1.00 | 29.75 |
| ATOM | 1127 | CD2 | LEU | 1600 | 23.666 | -8.731  | 21.404 | 1.00 | 24.50 |
| ATOM | 1128 | C   | LEU | 1600 | 22.136 | -11.478 | 18.212 | 1.00 | 31.39 |
| ATOM | 1129 | O   | LEU | 1600 | 21.620 | -10.686 | 17.418 | 1.00 | 31.23 |
| ATOM | 1130 | N   | VAL | 1601 | 22.439 | -12.729 | 17.863 | 1.00 | 30.00 |
| ATOM | 1132 | CA  | VAL | 1601 | 22.161 | -13.231 | 16.518 | 1.00 | 27.94 |
| ATOM | 1133 | CB  | VAL | 1601 | 22.827 | -14.600 | 16.261 | 1.00 | 27.68 |
| ATOM | 1134 | CG1 | VAL | 1601 | 22.467 | -15.108 | 14.885 | 1.00 | 24.69 |
| ATOM | 1135 | CG2 | VAL | 1601 | 24.326 | -14.474 | 16.362 | 1.00 | 25.87 |
| ATOM | 1136 | C   | VAL | 1601 | 20.642 | -13.340 | 16.310 | 1.00 | 28.98 |
| ATOM | 1137 | O   | VAL | 1601 | 20.152 | -13.151 | 15.191 | 1.00 | 28.55 |
| ATOM | 1138 | N   | SER | 1602 | 19.904 | -13.635 | 17.382 | 1.00 | 27.64 |
| ATOM | 1140 | CA  | SER | 1602 | 18.450 | -13.726 | 17.318 | 1.00 | 27.07 |

|      |      |     |     |      |        |         |        |      |       |      |
|------|------|-----|-----|------|--------|---------|--------|------|-------|------|
| ATOM | 1141 | CB  | SER | 1602 | 17.899 | -14.362 | 18.584 | 1.00 | 29.97 |      |
| ATOM | 1142 | OG  | SER | 1602 | 16.488 | -14.202 | 18.673 | 1.00 | 38.86 |      |
| ATOM | 1144 | C   | SER | 1602 | 17.864 | -12.327 | 17.093 | 1.00 | 27.45 |      |
| ATOM | 1145 | O   | SER | 1602 | 16.826 | -12.181 | 16.438 | 1.00 | 29.38 |      |
| ATOM | 1146 | N   | CYS | 1603 | 18.504 | -11.306 | 17.663 | 1.00 | 25.31 |      |
| ATOM | 1148 | CA  | CYS | 1603 | 18.087 | -9.909  | 17.461 | 1.00 | 24.49 |      |
| ATOM | 1149 | CB  | CYS | 1603 | 19.074 | -8.965  | 18.143 | 1.00 | 21.15 |      |
| ATOM | 1150 | SG  | CYS | 1603 | 18.716 | -7.213  | 18.030 | 0.50 | 11.83 | PRT1 |
| ATOM | 1151 | C   | CYS | 1603 | 18.155 | -9.628  | 15.961 | 1.00 | 26.92 |      |
| ATOM | 1152 | O   | CYS | 1603 | 17.175 | -9.238  | 15.329 | 1.00 | 30.04 |      |
| ATOM | 1153 | N   | ALA | 1604 | 19.340 | -9.833  | 15.398 | 1.00 | 28.35 |      |
| ATOM | 1155 | CA  | ALA | 1604 | 19.573 | -9.611  | 13.979 | 1.00 | 28.00 |      |
| ATOM | 1156 | CB  | ALA | 1604 | 20.970 | -10.098 | 13.588 | 1.00 | 25.49 |      |
| ATOM | 1157 | C   | ALA | 1604 | 18.517 | -10.295 | 13.132 | 1.00 | 26.69 |      |
| ATOM | 1158 | O   | ALA | 1604 | 17.892 | -9.646  | 12.310 | 1.00 | 31.40 |      |
| ATOM | 1159 | N   | TYR | 1605 | 18.270 | -11.577 | 13.399 | 1.00 | 26.33 |      |
| ATOM | 1161 | CA  | TYR | 1605 | 17.286 | -12.384 | 12.666 | 1.00 | 24.79 |      |
| ATOM | 1162 | CB  | TYR | 1605 | 17.209 | -13.771 | 13.300 | 1.00 | 23.42 |      |
| ATOM | 1163 | CG  | TYR | 1605 | 16.132 | -14.663 | 12.742 | 1.00 | 29.93 |      |
| ATOM | 1164 | CD1 | TYR | 1605 | 16.281 | -15.298 | 11.510 | 1.00 | 30.00 |      |
| ATOM | 1165 | CE1 | TYR | 1605 | 15.270 | -16.097 | 10.989 | 1.00 | 32.29 |      |
| ATOM | 1166 | CD2 | TYR | 1605 | 14.949 | -14.859 | 13.441 | 1.00 | 32.69 |      |
| ATOM | 1167 | CE2 | TYR | 1605 | 13.935 | -15.650 | 12.934 | 1.00 | 33.02 |      |
| ATOM | 1168 | CZ  | TYR | 1605 | 14.091 | -16.266 | 11.713 | 1.00 | 34.40 |      |
| ATOM | 1169 | OH  | TYR | 1605 | 13.037 | -17.023 | 11.225 | 1.00 | 34.18 |      |
| ATOM | 1171 | C   | TYR | 1605 | 15.885 | -11.750 | 12.572 | 1.00 | 26.08 |      |
| ATOM | 1172 | O   | TYR | 1605 | 15.327 | -11.587 | 11.475 | 1.00 | 25.43 |      |
| ATOM | 1173 | N   | GLN | 1606 | 15.337 | -11.366 | 13.717 | 1.00 | 25.38 |      |
| ATOM | 1175 | CA  | GLN | 1606 | 14.018 | -10.737 | 13.776 | 1.00 | 25.47 |      |
| ATOM | 1176 | CB  | GLN | 1606 | 13.662 | -10.424 | 15.227 | 1.00 | 24.21 |      |
| ATOM | 1177 | CG  | GLN | 1606 | 13.642 | -11.636 | 16.127 | 1.00 | 24.37 |      |
| ATOM | 1178 | CD  | GLN | 1606 | 13.237 | -11.279 | 17.540 | 1.00 | 27.16 |      |
| ATOM | 1179 | OE1 | GLN | 1606 | 12.227 | -10.603 | 17.758 | 1.00 | 29.64 |      |
| ATOM | 1180 | NE2 | GLN | 1606 | 14.033 | -11.705 | 18.507 | 1.00 | 30.69 |      |
| ATOM | 1183 | C   | GLN | 1606 | 13.953 | -9.449  | 12.949 | 1.00 | 26.89 |      |
| ATOM | 1184 | O   | GLN | 1606 | 12.936 | -9.136  | 12.319 | 1.00 | 26.40 |      |
| ATOM | 1185 | N   | VAL | 1607 | 15.030 | -8.674  | 13.000 | 1.00 | 27.79 |      |
| ATOM | 1187 | CA  | VAL | 1607 | 15.120 | -7.430  | 12.255 | 1.00 | 26.35 |      |
| ATOM | 1188 | CB  | VAL | 1607 | 16.408 | -6.667  | 12.625 | 1.00 | 24.87 |      |
| ATOM | 1189 | CG1 | VAL | 1607 | 16.556 | -5.433  | 11.752 | 1.00 | 25.90 |      |
| ATOM | 1190 | CG2 | VAL | 1607 | 16.382 | -6.282  | 14.094 | 1.00 | 17.95 |      |
| ATOM | 1191 | C   | VAL | 1607 | 15.121 | -7.743  | 10.757 | 1.00 | 27.69 |      |
| ATOM | 1192 | O   | VAL | 1607 | 14.406 | -7.093  | 9.979  | 1.00 | 30.85 |      |
| ATOM | 1193 | N   | ALA | 1608 | 15.902 | -8.749  | 10.355 | 1.00 | 24.59 |      |
| ATOM | 1195 | CA  | ALA | 1608 | 15.965 | -9.135  | 8.950  | 1.00 | 23.22 |      |
| ATOM | 1196 | CB  | ALA | 1608 | 16.971 | -10.227 | 8.750  | 1.00 | 17.65 |      |
| ATOM | 1197 | C   | ALA | 1608 | 14.579 | -9.589  | 8.492  | 1.00 | 24.58 |      |
| ATOM | 1198 | O   | ALA | 1608 | 14.201 | -9.372  | 7.337  | 1.00 | 26.22 |      |
| ATOM | 1199 | N   | ARG | 1609 | 13.819 | -10.191 | 9.409  | 1.00 | 25.65 |      |
| ATOM | 1201 | CA  | ARG | 1609 | 12.453 | -10.648 | 9.124  | 1.00 | 24.86 |      |
| ATOM | 1202 | CB  | ARG | 1609 | 11.998 | -11.660 | 10.160 | 1.00 | 28.15 |      |
| ATOM | 1203 | CG  | ARG | 1609 | 12.451 | -13.050 | 9.863  | 1.00 | 30.10 |      |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1204 | CD  | ARG | 1609 | 11.683 | -13.980 | 10.723 | 1.00 | 32.49 |
| ATOM | 1205 | NE  | ARG | 1609 | 10.942 | -14.941 | 9.927  | 1.00 | 34.58 |
| ATOM | 1207 | CZ  | ARG | 1609 | 10.058 | -15.792 | 10.437 | 1.00 | 35.69 |
| ATOM | 1208 | NH1 | ARG | 1609 | 9.800  | -15.790 | 11.740 | 1.00 | 32.47 |
| ATOM | 1211 | NH2 | ARG | 1609 | 9.468  | -16.678 | 9.645  | 1.00 | 36.67 |
| ATOM | 1214 | C   | ARG | 1609 | 11.421 | -9.518  | 9.008  | 1.00 | 22.96 |
| ATOM | 1215 | O   | ARG | 1609 | 10.522 | -9.582  | 8.155  | 1.00 | 23.65 |
| ATOM | 1216 | N   | GLY | 1610 | 11.501 | -8.522  | 9.888  | 1.00 | 20.88 |
| ATOM | 1218 | CA  | GLY | 1610 | 10.591 | -7.398  | 9.789  | 1.00 | 21.47 |
| ATOM | 1219 | C   | GLY | 1610 | 10.822 | -6.741  | 8.432  | 1.00 | 23.55 |
| ATOM | 1220 | O   | GLY | 1610 | 9.872  | -6.452  | 7.688  | 1.00 | 23.53 |
| ATOM | 1221 | N   | MET | 1611 | 12.097 | -6.558  | 8.088  | 1.00 | 24.37 |
| ATOM | 1223 | CA  | MET | 1611 | 12.488 | -5.955  | 6.809  | 1.00 | 25.10 |
| ATOM | 1224 | CB  | MET | 1611 | 13.991 | -5.686  | 6.801  | 1.00 | 25.47 |
| ATOM | 1225 | CG  | MET | 1611 | 14.391 | -4.478  | 7.652  | 1.00 | 27.09 |
| ATOM | 1226 | SD  | MET | 1611 | 13.362 | -3.000  | 7.330  | 1.00 | 22.57 |
| ATOM | 1227 | CE  | MET | 1611 | 13.665 | -2.715  | 5.612  | 1.00 | 21.91 |
| ATOM | 1228 | C   | MET | 1611 | 12.090 | -6.791  | 5.590  | 1.00 | 26.57 |
| ATOM | 1229 | O   | MET | 1611 | 11.700 | -6.251  | 4.553  | 1.00 | 24.98 |
| ATOM | 1230 | N   | GLU | 1612 | 12.213 | -8.108  | 5.710  | 1.00 | 27.89 |
| ATOM | 1232 | CA  | GLU | 1612 | 11.836 | -9.003  | 4.632  | 1.00 | 26.91 |
| ATOM | 1233 | CB  | GLU | 1612 | 12.120 | -10.446 | 5.024  | 1.00 | 26.70 |
| ATOM | 1234 | CG  | GLU | 1612 | 11.602 | -11.443 | 4.026  | 1.00 | 29.25 |
| ATOM | 1235 | CD  | GLU | 1612 | 11.796 | -12.872 | 4.477  | 1.00 | 31.24 |
| ATOM | 1236 | OE1 | GLU | 1612 | 11.658 | -13.143 | 5.692  | 1.00 | 33.39 |
| ATOM | 1237 | OE2 | GLU | 1612 | 12.085 | -13.733 | 3.617  | 1.00 | 31.91 |
| ATOM | 1238 | C   | GLU | 1612 | 10.354 | -8.812  | 4.305  | 1.00 | 27.55 |
| ATOM | 1239 | O   | GLU | 1612 | 9.974  | -8.697  | 3.130  | 1.00 | 30.04 |
| ATOM | 1240 | N   | TYR | 1613 | 9.518  | -8.752  | 5.337  | 1.00 | 25.13 |
| ATOM | 1242 | CA  | TYR | 1613 | 8.092  | -8.545  | 5.133  | 1.00 | 21.91 |
| ATOM | 1243 | CB  | TYR | 1613 | 7.341  | -8.625  | 6.462  | 1.00 | 21.00 |
| ATOM | 1244 | CG  | TYR | 1613 | 5.867  | -8.318  | 6.335  | 1.00 | 17.47 |
| ATOM | 1245 | CD1 | TYR | 1613 | 4.969  | -9.307  | 5.968  | 1.00 | 18.34 |
| ATOM | 1246 | CE1 | TYR | 1613 | 3.610  | -9.049  | 5.872  | 1.00 | 18.83 |
| ATOM | 1247 | CD2 | TYR | 1613 | 5.373  | -7.041  | 6.600  | 1.00 | 14.48 |
| ATOM | 1248 | CE2 | TYR | 1613 | 4.017  | -6.761  | 6.502  | 1.00 | 19.67 |
| ATOM | 1249 | CZ  | TYR | 1613 | 3.137  | -7.776  | 6.135  | 1.00 | 22.67 |
| ATOM | 1250 | OH  | TYR | 1613 | 1.779  | -7.542  | 6.009  | 1.00 | 21.91 |
| ATOM | 1252 | C   | TYR | 1613 | 7.870  | -7.170  | 4.504  | 1.00 | 22.06 |
| ATOM | 1253 | O   | TYR | 1613 | 7.125  | -7.034  | 3.540  | 1.00 | 22.01 |
| ATOM | 1254 | N   | LEU | 1614 | 8.541  | -6.154  | 5.045  | 1.00 | 22.04 |
| ATOM | 1256 | CA  | LEU | 1614 | 8.400  | -4.794  | 4.536  | 1.00 | 20.56 |
| ATOM | 1257 | CB  | LEU | 1614 | 9.219  | -3.830  | 5.392  | 1.00 | 18.43 |
| ATOM | 1258 | CG  | LEU | 1614 | 8.548  | -3.413  | 6.707  | 1.00 | 15.96 |
| ATOM | 1259 | CD1 | LEU | 1614 | 9.509  | -2.571  | 7.518  | 1.00 | 15.70 |
| ATOM | 1260 | CD2 | LEU | 1614 | 7.255  | -2.647  | 6.436  | 1.00 | 11.06 |
| ATOM | 1261 | C   | LEU | 1614 | 8.793  | -4.671  | 3.066  | 1.00 | 22.69 |
| ATOM | 1262 | O   | LEU | 1614 | 8.156  | -3.939  | 2.294  | 1.00 | 24.91 |
| ATOM | 1263 | N   | ALA | 1615 | 9.840  | -5.397  | 2.684  | 1.00 | 24.55 |
| ATOM | 1265 | CA  | ALA | 1615 | 10.333 | -5.408  | 1.317  | 1.00 | 21.18 |
| ATOM | 1266 | CB  | ALA | 1615 | 11.685 | -6.088  | 1.254  | 1.00 | 18.35 |
| ATOM | 1267 | C   | ALA | 1615 | 9.334  | -6.107  | 0.404  | 1.00 | 21.97 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1268 | O   | ALA | 1615 | 9.089  | -5.642 | -0.705 | 1.00 | 23.80 |
| ATOM | 1269 | N   | SER | 1616 | 8.704  | -7.173 | 0.893  | 1.00 | 22.49 |
| ATOM | 1271 | CA  | SER | 1616 | 7.722  | -7.919 | 0.097  | 1.00 | 21.81 |
| ATOM | 1272 | CB  | SER | 1616 | 7.305  | -9.179 | 0.831  | 1.00 | 19.78 |
| ATOM | 1273 | OG  | SER | 1616 | 6.382  | -8.862 | 1.851  | 1.00 | 23.88 |
| ATOM | 1275 | C   | SER | 1616 | 6.475  | -7.071 | -0.149 | 1.00 | 23.60 |
| ATOM | 1276 | O   | SER | 1616 | 5.733  | -7.277 | -1.117 | 1.00 | 21.74 |
| ATOM | 1277 | N   | LYS | 1617 | 6.217  | -6.169 | 0.789  | 1.00 | 25.84 |
| ATOM | 1279 | CA  | LYS | 1617 | 5.078  | -5.280 | 0.705  | 1.00 | 23.96 |
| ATOM | 1280 | CB  | LYS | 1617 | 4.555  | -4.951 | 2.099  | 1.00 | 20.74 |
| ATOM | 1281 | CG  | LYS | 1617 | 3.843  | -6.124 | 2.750  | 1.00 | 23.40 |
| ATOM | 1282 | CD  | LYS | 1617 | 2.509  | -6.395 | 2.081  | 1.00 | 28.70 |
| ATOM | 1283 | CE  | LYS | 1617 | 1.714  | -7.442 | 2.809  | 1.00 | 31.16 |
| ATOM | 1284 | NZ  | LYS | 1617 | 2.339  | -8.767 | 2.616  | 1.00 | 41.91 |
| ATOM | 1288 | C   | LYS | 1617 | 5.409  | -4.019 | -0.061 | 1.00 | 24.25 |
| ATOM | 1289 | O   | LYS | 1617 | 4.640  | -3.053 | -0.022 | 1.00 | 25.22 |
| ATOM | 1290 | N   | LYS | 1618 | 6.557  | -4.028 | -0.748 | 1.00 | 24.20 |
| ATOM | 1292 | CA  | LYS | 1618 | 7.014  | -2.904 | -1.582 | 1.00 | 25.15 |
| ATOM | 1293 | CB  | LYS | 1618 | 5.906  | -2.507 | -2.571 | 1.00 | 27.00 |
| ATOM | 1294 | CG  | LYS | 1618 | 5.735  | -3.411 | -3.790 | 1.00 | 29.09 |
| ATOM | 1295 | CD  | LYS | 1618 | 5.506  | -4.864 | -3.432 | 1.00 | 31.82 |
| ATOM | 1296 | CE  | LYS | 1618 | 5.533  | -5.752 | -4.663 | 1.00 | 30.21 |
| ATOM | 1297 | NZ  | LYS | 1618 | 4.231  | -5.707 | -5.369 | 1.00 | 26.34 |
| ATOM | 1301 | C   | LYS | 1618 | 7.466  | -1.658 | -0.816 | 1.00 | 23.50 |
| ATOM | 1302 | O   | LYS | 1618 | 7.537  | -0.576 | -1.385 | 1.00 | 22.10 |
| ATOM | 1303 | N   | CYS | 1619 | 7.827  | -1.821 | 0.449  | 1.00 | 23.72 |
| ATOM | 1305 | CA  | CYS | 1619 | 8.213  | -0.693 | 1.276  | 1.00 | 20.89 |
| ATOM | 1306 | CB  | CYS | 1619 | 7.535  | -0.814 | 2.647  | 1.00 | 18.41 |
| ATOM | 1307 | SG  | CYS | 1619 | 8.019  | 0.405  | 3.894  | 1.00 | 26.34 |
| ATOM | 1308 | C   | CYS | 1619 | 9.717  | -0.529 | 1.451  | 1.00 | 22.94 |
| ATOM | 1309 | O   | CYS | 1619 | 10.419 | -1.487 | 1.790  | 1.00 | 23.20 |
| ATOM | 1310 | N   | ILE | 1620 | 10.197 | 0.690  | 1.211  | 1.00 | 21.17 |
| ATOM | 1312 | CA  | ILE | 1620 | 11.610 | 1.039  | 1.388  | 1.00 | 22.35 |
| ATOM | 1313 | CB  | ILE | 1620 | 12.151 | 1.823  | 0.172  | 1.00 | 17.30 |
| ATOM | 1314 | CG2 | ILE | 1620 | 13.607 | 2.215  | 0.393  | 1.00 | 8.27  |
| ATOM | 1315 | CG1 | ILE | 1620 | 11.966 | 0.997  | -1.111 | 1.00 | 18.27 |
| ATOM | 1316 | CD1 | ILE | 1620 | 12.127 | 1.803  | -2.401 | 1.00 | 17.57 |
| ATOM | 1317 | C   | ILE | 1620 | 11.631 | 1.926  | 2.652  | 1.00 | 25.20 |
| ATOM | 1318 | O   | ILE | 1620 | 10.912 | 2.932  | 2.715  | 1.00 | 29.69 |
| ATOM | 1319 | N   | HIS | 1621 | 12.398 | 1.526  | 3.665  | 1.00 | 22.66 |
| ATOM | 1321 | CA  | HIS | 1621 | 12.463 | 2.254  | 4.931  | 1.00 | 22.78 |
| ATOM | 1322 | CB  | HIS | 1621 | 13.214 | 1.425  | 5.980  | 1.00 | 22.65 |
| ATOM | 1323 | CG  | HIS | 1621 | 13.024 | 1.897  | 7.398  | 1.00 | 22.07 |
| ATOM | 1324 | CD2 | HIS | 1621 | 12.485 | 1.280  | 8.475  | 1.00 | 20.50 |
| ATOM | 1325 | ND1 | HIS | 1621 | 13.449 | 3.134  | 7.842  | 1.00 | 23.11 |
| ATOM | 1327 | CE1 | HIS | 1621 | 13.182 | 3.253  | 9.131  | 1.00 | 23.92 |
| ATOM | 1328 | NE2 | HIS | 1621 | 12.596 | 2.144  | 9.543  | 1.00 | 24.44 |
| ATOM | 1330 | C   | HIS | 1621 | 13.110 | 3.616  | 4.831  | 1.00 | 24.07 |
| ATOM | 1331 | O   | HIS | 1621 | 12.561 | 4.597  | 5.306  | 1.00 | 24.37 |
| ATOM | 1332 | N   | ARG | 1622 | 14.327 | 3.639  | 4.291  | 1.00 | 26.42 |
| ATOM | 1334 | CA  | ARG | 1622 | 15.129 | 4.853  | 4.130  | 1.00 | 24.59 |
| ATOM | 1335 | CB  | ARG | 1622 | 14.289 | 6.018  | 3.581  | 1.00 | 17.58 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1336 | CG  | ARG | 1622 | 13.810 | 5.767  | 2.163  | 1.00 | 13.88 |
| ATOM | 1337 | CD  | ARG | 1622 | 12.925 | 6.860  | 1.634  | 0.50 | 4.97  |
| ATOM | 1338 | NE  | ARG | 1622 | 12.574 | 6.590  | 0.243  | 0.50 | 6.49  |
| ATOM | 1340 | CZ  | ARG | 1622 | 11.537 | 5.852  | -0.145 | 0.50 | 3.84  |
| ATOM | 1341 | NH1 | ARG | 1622 | 10.719 | 5.308  | 0.753  | 0.50 | 2.25  |
| ATOM | 1344 | NH2 | ARG | 1622 | 11.356 | 5.611  | -1.433 | 0.50 | 2.48  |
| ATOM | 1347 | C   | ARG | 1622 | 15.918 | 5.257  | 5.388  | 1.00 | 24.72 |
| ATOM | 1348 | O   | ARG | 1622 | 16.767 | 6.138  | 5.337  | 1.00 | 26.90 |
| ATOM | 1349 | N   | ASP | 1623 | 15.685 | 4.585  | 6.505  | 1.00 | 25.61 |
| ATOM | 1351 | CA  | ASP | 1623 | 16.437 | 4.927  | 7.703  | 1.00 | 28.41 |
| ATOM | 1352 | CB  | ASP | 1623 | 15.922 | 6.213  | 8.349  | 1.00 | 30.38 |
| ATOM | 1353 | CG  | ASP | 1623 | 16.891 | 6.772  | 9.373  | 1.00 | 33.47 |
| ATOM | 1354 | OD1 | ASP | 1623 | 16.428 | 7.338  | 10.382 | 1.00 | 43.35 |
| ATOM | 1355 | OD2 | ASP | 1623 | 18.121 | 6.645  | 9.167  | 1.00 | 31.88 |
| ATOM | 1356 | C   | ASP | 1623 | 16.498 | 3.797  | 8.713  | 1.00 | 28.86 |
| ATOM | 1357 | O   | ASP | 1623 | 16.148 | 3.959  | 9.887  | 1.00 | 28.31 |
| ATOM | 1358 | N   | LEU | 1624 | 16.956 | 2.642  | 8.246  | 1.00 | 27.81 |
| ATOM | 1360 | CA  | LEU | 1624 | 17.087 | 1.480  | 9.107  | 1.00 | 27.28 |
| ATOM | 1361 | CB  | LEU | 1624 | 17.149 | 0.220  | 8.242  | 1.00 | 27.53 |
| ATOM | 1362 | CG  | LEU | 1624 | 17.118 | -1.150 | 8.916  | 1.00 | 27.69 |
| ATOM | 1363 | CD1 | LEU | 1624 | 15.850 | -1.348 | 9.756  | 1.00 | 23.77 |
| ATOM | 1364 | CD2 | LEU | 1624 | 17.228 | -2.175 | 7.805  | 1.00 | 29.15 |
| ATOM | 1365 | C   | LEU | 1624 | 18.340 | 1.628  | 10.002 | 1.00 | 26.27 |
| ATOM | 1366 | O   | LEU | 1624 | 19.464 | 1.773  | 9.514  | 1.00 | 25.89 |
| ATOM | 1367 | N   | ALA | 1625 | 18.116 | 1.598  | 11.313 | 1.00 | 23.29 |
| ATOM | 1369 | CA  | ALA | 1625 | 19.164 | 1.750  | 12.314 | 1.00 | 19.68 |
| ATOM | 1370 | CB  | ALA | 1625 | 19.520 | 3.233  | 12.473 | 1.00 | 18.85 |
| ATOM | 1371 | C   | ALA | 1625 | 18.575 | 1.214  | 13.613 | 1.00 | 20.79 |
| ATOM | 1372 | O   | ALA | 1625 | 17.352 | 1.077  | 13.716 | 1.00 | 20.75 |
| ATOM | 1373 | N   | ALA | 1626 | 19.429 | 0.942  | 14.605 | 1.00 | 22.02 |
| ATOM | 1375 | CA  | ALA | 1626 | 18.969 | 0.408  | 15.900 | 1.00 | 23.43 |
| ATOM | 1376 | CB  | ALA | 1626 | 20.139 | -0.048 | 16.764 | 1.00 | 22.46 |
| ATOM | 1377 | C   | ALA | 1626 | 18.111 | 1.397  | 16.664 | 1.00 | 25.86 |
| ATOM | 1378 | O   | ALA | 1626 | 17.333 | 1.006  | 17.523 | 1.00 | 29.51 |
| ATOM | 1379 | N   | ARG | 1627 | 18.303 | 2.685  | 16.407 | 1.00 | 26.92 |
| ATOM | 1381 | CA  | ARG | 1627 | 17.503 | 3.722  | 17.048 | 1.00 | 27.30 |
| ATOM | 1382 | CB  | ARG | 1627 | 18.017 | 5.107  | 16.627 | 1.00 | 28.29 |
| ATOM | 1383 | CG  | ARG | 1627 | 18.086 | 5.287  | 15.104 | 1.00 | 36.26 |
| ATOM | 1384 | CD  | ARG | 1627 | 18.255 | 6.756  | 14.688 | 1.00 | 41.19 |
| ATOM | 1385 | NE  | ARG | 1627 | 18.548 | 6.928  | 13.261 | 1.00 | 39.94 |
| ATOM | 1387 | CZ  | ARG | 1627 | 19.779 | 6.904  | 12.749 | 1.00 | 42.33 |
| ATOM | 1388 | NH1 | ARG | 1627 | 20.826 | 6.721  | 13.539 | 1.00 | 44.75 |
| ATOM | 1391 | NH2 | ARG | 1627 | 19.976 | 7.059  | 11.450 | 1.00 | 41.50 |
| ATOM | 1394 | C   | ARG | 1627 | 16.029 | 3.567  | 16.591 | 1.00 | 27.42 |
| ATOM | 1395 | O   | ARG | 1627 | 15.092 | 3.897  | 17.333 | 1.00 | 26.53 |
| ATOM | 1396 | N   | ASN | 1628 | 15.850 | 3.039  | 15.375 | 1.00 | 26.82 |
| ATOM | 1398 | CA  | ASN | 1628 | 14.534 | 2.849  | 14.758 | 1.00 | 24.08 |
| ATOM | 1399 | CB  | ASN | 1628 | 14.569 | 3.308  | 13.301 | 1.00 | 26.30 |
| ATOM | 1400 | CG  | ASN | 1628 | 14.709 | 4.823  | 13.167 | 1.00 | 25.19 |
| ATOM | 1401 | OD1 | ASN | 1628 | 14.018 | 5.567  | 13.844 | 1.00 | 28.59 |
| ATOM | 1402 | ND2 | ASN | 1628 | 15.599 | 5.277  | 12.297 | 1.00 | 22.32 |
| ATOM | 1405 | C   | ASN | 1628 | 13.945 | 1.440  | 14.862 | 1.00 | 24.35 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1406 | O   | ASN | 1628 | 13.026 | 1.084   | 14.105 | 1.00 | 24.66 |
| ATOM | 1407 | N   | VAL | 1629 | 14.473 | 0.637   | 15.785 | 1.00 | 22.35 |
| ATOM | 1409 | CA  | VAL | 1629 | 13.988 | -0.718  | 16.055 | 1.00 | 20.65 |
| ATOM | 1410 | CB  | VAL | 1629 | 15.077 | -1.813  | 15.822 | 1.00 | 18.07 |
| ATOM | 1411 | CG1 | VAL | 1629 | 14.612 | -3.142  | 16.398 | 1.00 | 11.84 |
| ATOM | 1412 | CG2 | VAL | 1629 | 15.378 | -1.977  | 14.346 | 1.00 | 12.65 |
| ATOM | 1413 | C   | VAL | 1629 | 13.625 | -0.670  | 17.536 | 1.00 | 24.27 |
| ATOM | 1414 | O   | VAL | 1629 | 14.427 | -0.237  | 18.361 | 1.00 | 25.94 |
| ATOM | 1415 | N   | LEU | 1630 | 12.393 | -1.031  | 17.866 | 1.00 | 24.99 |
| ATOM | 1417 | CA  | LEU | 1630 | 11.936 | -1.010  | 19.247 | 1.00 | 25.50 |
| ATOM | 1418 | CB  | LEU | 1630 | 10.609 | -0.252  | 19.339 | 1.00 | 22.79 |
| ATOM | 1419 | CG  | LEU | 1630 | 10.634 | 1.179   | 18.789 | 1.00 | 17.86 |
| ATOM | 1420 | CD1 | LEU | 1630 | 9.240  | 1.680   | 18.654 | 1.00 | 18.49 |
| ATOM | 1421 | CD2 | LEU | 1630 | 11.409 | 2.100   | 19.668 | 1.00 | 17.63 |
| ATOM | 1422 | C   | LEU | 1630 | 11.833 | -2.434  | 19.829 | 1.00 | 28.29 |
| ATOM | 1423 | O   | LEU | 1630 | 11.666 | -3.412  | 19.092 | 1.00 | 28.56 |
| ATOM | 1424 | N   | VAL | 1631 | 11.933 | -2.542  | 21.150 | 1.00 | 29.46 |
| ATOM | 1426 | CA  | VAL | 1631 | 11.883 | -3.831  | 21.833 | 1.00 | 29.40 |
| ATOM | 1427 | CB  | VAL | 1631 | 13.222 | -4.105  | 22.553 | 1.00 | 27.48 |
| ATOM | 1428 | CG1 | VAL | 1631 | 13.210 | -5.477  | 23.233 | 1.00 | 24.53 |
| ATOM | 1429 | CG2 | VAL | 1631 | 14.376 | -3.976  | 21.576 | 1.00 | 22.55 |
| ATOM | 1430 | C   | VAL | 1631 | 10.730 | -3.918  | 22.853 | 1.00 | 31.94 |
| ATOM | 1431 | O   | VAL | 1631 | 10.630 | -3.102  | 23.787 | 1.00 | 33.13 |
| ATOM | 1432 | N   | THR | 1632 | 9.866  | -4.911  | 22.659 | 1.00 | 32.21 |
| ATOM | 1434 | CA  | THR | 1632 | 8.728  | -5.149  | 23.540 | 1.00 | 31.77 |
| ATOM | 1435 | CB  | THR | 1632 | 7.674  | -6.061  | 22.874 | 1.00 | 32.38 |
| ATOM | 1436 | CG1 | THR | 1632 | 8.169  | -7.406  | 22.792 | 1.00 | 32.36 |
| ATOM | 1438 | CG2 | THR | 1632 | 7.330  | -5.554  | 21.480 | 1.00 | 28.05 |
| ATOM | 1439 | C   | THR | 1632 | 9.157  | -5.810  | 24.842 | 1.00 | 30.39 |
| ATOM | 1440 | O   | THR | 1632 | 10.256 | -6.320  | 24.947 | 1.00 | 30.28 |
| ATOM | 1441 | N   | GLU | 1633 | 8.260  | -5.823  | 25.822 | 1.00 | 32.43 |
| ATOM | 1443 | CA  | GLU | 1633 | 8.513  | -6.424  | 27.122 | 1.00 | 32.84 |
| ATOM | 1444 | CB  | GLU | 1633 | 7.259  | -6.310  | 27.991 | 1.00 | 35.28 |
| ATOM | 1445 | CG  | GLU | 1633 | 7.386  | -6.881  | 29.399 | 1.00 | 46.57 |
| ATOM | 1446 | CD  | GLU | 1633 | 8.463  | -6.192  | 30.260 | 1.00 | 54.03 |
| ATOM | 1447 | OE1 | GLU | 1633 | 8.519  | -4.939  | 30.297 | 1.00 | 58.68 |
| ATOM | 1448 | OE2 | GLU | 1633 | 9.249  | -6.916  | 30.918 | 1.00 | 56.84 |
| ATOM | 1449 | C   | GLU | 1633 | 8.914  | -7.889  | 26.986 | 1.00 | 35.14 |
| ATOM | 1450 | O   | GLU | 1633 | 9.632  | -8.435  | 27.826 | 1.00 | 33.92 |
| ATOM | 1451 | N   | ASP | 1634 | 8.456  | -8.526  | 25.910 | 1.00 | 38.25 |
| ATOM | 1453 | CA  | ASP | 1634 | 8.768  | -9.941  | 25.677 | 1.00 | 39.22 |
| ATOM | 1454 | CB  | ASP | 1634 | 7.588  | -10.639 | 24.990 | 1.00 | 44.88 |
| ATOM | 1455 | CG  | ASP | 1634 | 6.258  | -10.420 | 25.725 | 1.00 | 54.17 |
| ATOM | 1456 | OD1 | ASP | 1634 | 6.064  | -11.042 | 26.799 | 1.00 | 56.33 |
| ATOM | 1457 | OD2 | ASP | 1634 | 5.412  | -9.622  | 25.236 | 1.00 | 54.47 |
| ATOM | 1458 | C   | ASP | 1634 | 10.035 | -10.109 | 24.849 | 1.00 | 37.53 |
| ATOM | 1459 | O   | ASP | 1634 | 10.395 | -11.225 | 24.495 | 1.00 | 36.33 |
| ATOM | 1460 | N   | ASN | 1635 | 10.730 | -8.998  | 24.589 | 1.00 | 39.12 |
| ATOM | 1462 | CA  | ASN | 1635 | 11.974 | -8.948  | 23.792 | 1.00 | 37.21 |
| ATOM | 1463 | CB  | ASN | 1635 | 13.042 | -9.891  | 24.361 | 1.00 | 37.83 |
| ATOM | 1464 | CG  | ASN | 1635 | 13.576 | -9.426  | 25.677 | 1.00 | 38.65 |
| ATOM | 1465 | OD1 | ASN | 1635 | 13.795 | -8.236  | 25.880 | 1.00 | 43.82 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1466 | ND2 | ASN | 1635 | 13.768 | -10.353 | 26.596 | 1.00 | 39.49 |
| ATOM | 1469 | C   | ASN | 1635 | 11.807 | -9.193  | 22.287 | 1.00 | 35.03 |
| ATOM | 1470 | O   | ASN | 1635 | 12.649 | -9.834  | 21.648 | 1.00 | 32.37 |
| ATOM | 1471 | N   | VAL | 1636 | 10.705 | -8.700  | 21.736 | 1.00 | 33.30 |
| ATOM | 1473 | CA  | VAL | 1636 | 10.418 | -8.846  | 20.320 | 1.00 | 30.50 |
| ATOM | 1474 | CB  | VAL | 1636 | 8.895  | -9.014  | 20.075 | 1.00 | 31.54 |
| ATOM | 1475 | CG1 | VAL | 1636 | 8.600  | -9.178  | 18.584 | 1.00 | 29.16 |
| ATOM | 1476 | CG2 | VAL | 1636 | 8.384  | -10.214 | 20.838 | 1.00 | 34.29 |
| ATOM | 1477 | C   | VAL | 1636 | 10.908 | -7.577  | 19.629 | 1.00 | 29.28 |
| ATOM | 1478 | O   | VAL | 1636 | 10.553 | -6.463  | 20.037 | 1.00 | 27.08 |
| ATOM | 1479 | N   | MET | 1637 | 11.760 | -7.755  | 18.623 | 1.00 | 27.82 |
| ATOM | 1481 | CA  | MET | 1637 | 12.318 | -6.634  | 17.874 | 1.00 | 27.09 |
| ATOM | 1482 | CB  | MET | 1637 | 13.578 | -7.070  | 17.127 | 1.00 | 27.47 |
| ATOM | 1483 | CG  | MET | 1637 | 14.648 | -7.697  | 18.010 | 1.00 | 28.35 |
| ATOM | 1484 | SD  | MET | 1637 | 15.243 | -6.594  | 19.297 | 1.00 | 30.41 |
| ATOM | 1485 | CE  | MET | 1637 | 15.104 | -7.640  | 20.728 | 1.00 | 26.00 |
| ATOM | 1486 | C   | MET | 1637 | 11.272 | -6.200  | 16.868 | 1.00 | 26.01 |
| ATOM | 1487 | O   | MET | 1637 | 10.751 | -7.034  | 16.131 | 1.00 | 26.05 |
| ATOM | 1488 | N   | LYS | 1638 | 10.983 | -4.900  | 16.823 | 1.00 | 25.44 |
| ATOM | 1490 | CA  | LYS | 1638 | 9.984  | -4.349  | 15.906 | 1.00 | 22.01 |
| ATOM | 1491 | CB  | LYS | 1638 | 8.693  | -4.028  | 16.658 | 1.00 | 19.65 |
| ATOM | 1492 | CG  | LYS | 1638 | 7.887  | -5.254  | 17.034 | 1.00 | 21.22 |
| ATOM | 1493 | CD  | LYS | 1638 | 6.666  | -4.904  | 17.869 | 1.00 | 21.73 |
| ATOM | 1494 | CE  | LYS | 1638 | 5.776  | -6.133  | 18.076 | 1.00 | 19.32 |
| ATOM | 1495 | NZ  | LYS | 1638 | 4.970  | -5.522  | 16.869 | 1.00 | 23.14 |
| ATOM | 1499 | C   | LYS | 1638 | 10.477 | -3.106  | 15.191 | 1.00 | 21.85 |
| ATOM | 1500 | O   | LYS | 1638 | 10.896 | -2.147  | 15.808 | 1.00 | 24.35 |
| ATOM | 1501 | N   | ILE | 1639 | 10.371 | -3.110  | 13.878 | 1.00 | 24.47 |
| ATOM | 1503 | CA  | ILE | 1639 | 10.803 | -1.983  | 13.073 | 1.00 | 24.90 |
| ATOM | 1504 | CB  | ILE | 1639 | 11.090 | -2.443  | 11.625 | 1.00 | 22.12 |
| ATOM | 1505 | CG2 | ILE | 1639 | 11.413 | -1.275  | 10.720 | 1.00 | 17.41 |
| ATOM | 1506 | CG1 | ILE | 1639 | 12.256 | -3.423  | 11.664 | 1.00 | 18.67 |
| ATOM | 1507 | CD1 | ILE | 1639 | 12.309 | -4.308  | 10.492 | 1.00 | 26.15 |
| ATOM | 1508 | C   | ILE | 1639 | 9.772  | -0.856  | 13.117 | 1.00 | 28.52 |
| ATOM | 1509 | O   | ILE | 1639 | 8.557  | -1.094  | 12.964 | 1.00 | 27.86 |
| ATOM | 1510 | N   | ALA | 1640 | 10.267 | 0.363   | 13.358 | 1.00 | 30.06 |
| ATOM | 1512 | CA  | ALA | 1640 | 9.444  | 1.564   | 13.445 | 1.00 | 29.37 |
| ATOM | 1513 | CB  | ALA | 1640 | 9.627  | 2.211   | 14.812 | 1.00 | 28.25 |
| ATOM | 1514 | C   | ALA | 1640 | 9.782  | 2.566   | 12.344 | 1.00 | 29.68 |
| ATOM | 1515 | O   | ALA | 1640 | 10.808 | 2.453   | 11.660 | 1.00 | 30.81 |
| ATOM | 1516 | N   | ASP | 1641 | 8.892  | 3.536   | 12.154 | 1.00 | 30.35 |
| ATOM | 1518 | CA  | ASP | 1641 | 9.067  | 4.608   | 11.154 | 1.00 | 30.40 |
| ATOM | 1519 | CB  | ASP | 1641 | 10.309 | 5.454   | 11.454 | 1.00 | 32.89 |
| ATOM | 1520 | CG  | ASP | 1641 | 10.018 | 6.678   | 12.321 | 1.00 | 34.68 |
| ATOM | 1521 | OD1 | ASP | 1641 | 10.952 | 7.497   | 12.469 | 1.00 | 35.84 |
| ATOM | 1522 | OD2 | ASP | 1641 | 8.897  | 6.824   | 12.856 | 1.00 | 38.22 |
| ATOM | 1523 | C   | ASP | 1641 | 9.102  | 4.162   | 9.705  | 1.00 | 28.91 |
| ATOM | 1524 | O   | ASP | 1641 | 9.484  | 4.941   | 8.826  | 1.00 | 29.26 |
| ATOM | 1525 | N   | PHE | 1642 | 8.650  | 2.941   | 9.440  | 1.00 | 27.21 |
| ATOM | 1527 | CA  | PHE | 1642 | 8.648  | 2.435   | 8.072  | 1.00 | 25.07 |
| ATOM | 1528 | CB  | PHE | 1642 | 8.432  | 0.909   | 8.043  | 1.00 | 19.64 |
| ATOM | 1529 | CG  | PHE | 1642 | 7.135  | 0.451   | 8.639  | 1.00 | 16.47 |



|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1530 | CD1 | PHE | 1642 | 5.974  | 0.400  | 7.878  | 1.00 | 21.72 |
| ATOM | 1531 | CD2 | PHE | 1642 | 7.080  | 0.018  | 9.945  | 1.00 | 17.01 |
| ATOM | 1532 | CE1 | PHE | 1642 | 4.781  | -0.082 | 8.422  | 1.00 | 20.97 |
| ATOM | 1533 | CE2 | PHE | 1642 | 5.892  | -0.463 | 10.496 | 1.00 | 18.72 |
| ATOM | 1534 | CZ  | PHE | 1642 | 4.743  | -0.515 | 9.739  | 1.00 | 20.32 |
| ATOM | 1535 | C   | PHE | 1642 | 7.667  | 3.174  | 7.157  | 1.00 | 25.57 |
| ATOM | 1536 | O   | PHE | 1642 | 7.910  | 3.292  | 5.971  | 1.00 | 28.40 |
| ATOM | 1537 | N   | GLY | 1643 | 6.585  | 3.718  | 7.707  | 1.00 | 25.69 |
| ATOM | 1539 | CA  | GLY | 1643 | 5.631  | 4.427  | 6.866  | 1.00 | 24.81 |
| ATOM | 1540 | C   | GLY | 1643 | 5.786  | 5.935  | 6.893  | 1.00 | 24.84 |
| ATOM | 1541 | O   | GLY | 1643 | 4.922  | 6.684  | 6.436  | 1.00 | 19.20 |
| ATOM | 1542 | N   | LEU | 1644 | 6.930  | 6.387  | 7.376  | 1.00 | 29.50 |
| ATOM | 1544 | CA  | LEU | 1644 | 7.189  | 7.808  | 7.491  | 1.00 | 34.24 |
| ATOM | 1545 | CB  | LEU | 1644 | 8.498  | 8.037  | 8.242  | 1.00 | 33.10 |
| ATOM | 1546 | CG  | LEU | 1644 | 8.473  | 9.371  | 9.962  | 1.00 | 36.00 |
| ATOM | 1547 | CD1 | LEU | 1644 | 7.520  | 9.212  | 10.127 | 1.00 | 41.52 |
| ATOM | 1548 | CD2 | LEU | 1644 | 9.854  | 9.773  | 9.442  | 1.00 | 35.23 |
| ATOM | 1549 | C   | LEU | 1644 | 7.213  | 8.578  | 6.179  | 1.00 | 37.54 |
| ATOM | 1550 | O   | LEU | 1644 | 7.759  | 8.123  | 5.176  | 1.00 | 37.48 |
| ATOM | 1551 | N   | ALA | 1645 | 6.577  | 9.744  | 6.203  | 1.00 | 41.66 |
| ATOM | 1553 | CA  | ALA | 1645 | 6.524  | 10.652 | 5.067  | 1.00 | 43.66 |
| ATOM | 1554 | CB  | ALA | 1645 | 5.309  | 11.563 | 5.202  | 1.00 | 38.13 |
| ATOM | 1555 | C   | ALA | 1645 | 7.819  | 11.475 | 5.141  | 1.00 | 44.67 |
| ATOM | 1556 | O   | ALA | 1645 | 8.105  | 12.082 | 6.176  | 1.00 | 47.17 |
| ATOM | 1557 | N   | ALA | 1646 | 8.622  | 11.462 | 4.082  | 1.00 | 45.69 |
| ATOM | 1559 | CA  | ALA | 1646 | 9.871  | 12.222 | 4.094  | 1.00 | 48.62 |
| ATOM | 1560 | CB  | ALA | 1646 | 10.971 | 11.405 | 4.778  | 1.00 | 49.50 |
| ATOM | 1561 | C   | ALA | 1646 | 10.338 | 12.661 | 2.712  | 1.00 | 50.98 |
| ATOM | 1562 | O   | ALA | 1646 | 10.319 | 11.880 | 1.759  | 1.00 | 52.84 |
| ATOM | 1563 | N   | ASP | 1647 | 10.755 | 13.919 | 2.598  | 1.00 | 53.09 |
| ATOM | 1565 | CA  | ASP | 1647 | 11.253 | 14.419 | 1.322  | 1.00 | 55.06 |
| ATOM | 1566 | CB  | ASP | 1647 | 10.868 | 15.887 | 1.092  | 1.00 | 56.05 |
| ATOM | 1567 | CG  | ASP | 1647 | 11.084 | 16.342 | -0.352 | 1.00 | 59.31 |
| ATOM | 1568 | OD1 | ASP | 1647 | 12.070 | 15.928 | -1.003 | 1.00 | 59.51 |
| ATOM | 1569 | OD2 | ASP | 1647 | 10.265 | 17.150 | -0.837 | 1.00 | 63.48 |
| ATOM | 1570 | C   | ASP | 1647 | 12.770 | 14.264 | 1.332  | 1.00 | 55.26 |
| ATOM | 1571 | O   | ASP | 1647 | 13.487 | 15.075 | 1.926  | 1.00 | 53.18 |
| ATOM | 1572 | N   | ILE | 1648 | 13.235 | 13.198 | 0.684  | 1.00 | 56.66 |
| ATOM | 1574 | CA  | ILE | 1648 | 14.652 | 12.877 | 0.595  | 1.00 | 57.79 |
| ATOM | 1575 | CB  | ILE | 1648 | 14.890 | 11.624 | -0.271 | 1.00 | 53.86 |
| ATOM | 1576 | CG2 | ILE | 1648 | 14.133 | 10.443 | 0.326  | 1.00 | 52.14 |
| ATOM | 1577 | CG1 | ILE | 1648 | 14.454 | 11.886 | -1.718 | 1.00 | 48.24 |
| ATOM | 1578 | CD1 | ILE | 1648 | 15.198 | 11.083 | -2.751 | 1.00 | 43.97 |
| ATOM | 1579 | C   | ILE | 1648 | 15.439 | 14.044 | 0.014  | 1.00 | 62.32 |
| ATOM | 1580 | O   | ILE | 1648 | 16.591 | 14.271 | 0.380  | 1.00 | 64.72 |
| ATOM | 1581 | N   | HIS | 1649 | 14.805 | 14.791 | -0.884 | 1.00 | 65.72 |
| ATOM | 1583 | CA  | HIS | 1649 | 15.450 | 15.941 | -1.500 | 1.00 | 69.00 |
| ATOM | 1584 | CB  | HIS | 1649 | 14.793 | 16.285 | -2.844 | 1.00 | 70.35 |
| ATOM | 1585 | CG  | HIS | 1649 | 15.123 | 15.332 | -3.944 | 1.00 | 73.90 |
| ATOM | 1586 | CD2 | HIS | 1649 | 16.257 | 14.628 | -4.208 | 1.00 | 75.13 |
| ATOM | 1587 | ND1 | HIS | 1649 | 14.239 | 15.006 | -4.946 | 1.00 | 75.30 |
| ATOM | 1589 | CE1 | HIS | 1649 | 14.798 | 14.148 | -5.779 | 1.00 | 76.83 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1590 | NE2 | HIS | 1649 | 16.025 | 13.905 | -5.348 | 1.00 | 76.74 |
| ATOM | 1592 | C   | HIS | 1649 | 15.419 | 17.150 | -0.576 | 1.00 | 70.22 |
| ATOM | 1593 | O   | HIS | 1649 | 15.517 | 18.284 | -1.041 | 1.00 | 72.83 |
| ATOM | 1594 | N   | HIS | 1650 | 15.218 | 16.912 | 0.718  | 1.00 | 71.28 |
| ATOM | 1596 | CA  | HIS | 1650 | 15.199 | 17.987 | 1.710  | 1.00 | 72.52 |
| ATOM | 1597 | CB  | HIS | 1650 | 13.776 | 18.488 | 1.956  | 1.00 | 75.67 |
| ATOM | 1598 | CG  | HIS | 1650 | 13.272 | 19.401 | 0.882  | 1.00 | 82.16 |
| ATOM | 1599 | CD2 | HIS | 1650 | 13.451 | 20.734 | 0.691  | 1.00 | 86.17 |
| ATOM | 1600 | ND1 | HIS | 1650 | 12.529 | 18.955 | -0.185 | 1.00 | 86.37 |
| ATOM | 1602 | CE1 | HIS | 1650 | 12.262 | 19.972 | -0.993 | 1.00 | 89.04 |
| ATOM | 1603 | NE2 | HIS | 1650 | 12.814 | 21.058 | -0.481 | 1.00 | 89.37 |
| ATOM | 1605 | C   | HIS | 1650 | 15.856 | 17.593 | 3.029  | 1.00 | 71.11 |
| ATOM | 1606 | O   | HIS | 1650 | 15.783 | 18.334 | 4.010  | 1.00 | 69.56 |
| ATOM | 1607 | N   | ILE | 1651 | 16.543 | 16.451 | 3.033  | 1.00 | 70.84 |
| ATOM | 1609 | CA  | ILE | 1651 | 17.221 | 15.939 | 4.222  | 1.00 | 70.50 |
| ATOM | 1610 | CB  | ILE | 1651 | 17.622 | 14.462 | 4.031  | 1.00 | 71.73 |
| ATOM | 1611 | CG2 | ILE | 1651 | 18.499 | 13.978 | 5.194  | 1.00 | 71.65 |
| ATOM | 1612 | CG1 | ILE | 1651 | 16.359 | 13.604 | 3.890  | 1.00 | 73.10 |
| ATOM | 1613 | CD1 | ILE | 1651 | 16.643 | 12.143 | 3.593  | 1.00 | 75.18 |
| ATOM | 1614 | C   | ILE | 1651 | 18.472 | 16.734 | 4.569  | 1.00 | 69.85 |
| ATOM | 1615 | O   | ILE | 1651 | 19.375 | 16.882 | 3.745  | 1.00 | 70.30 |
| ATOM | 1616 | N   | ASP | 1652 | 18.543 | 17.222 | 5.802  | 1.00 | 68.99 |
| ATOM | 1618 | CA  | ASP | 1652 | 19.707 | 17.987 | 6.240  | 1.00 | 68.06 |
| ATOM | 1619 | CB  | ASP | 1652 | 19.344 | 18.923 | 7.398  | 1.00 | 70.53 |
| ATOM | 1620 | CG  | ASP | 1652 | 20.512 | 19.790 | 7.843  | 1.00 | 72.86 |
| ATOM | 1621 | OD1 | ASP | 1652 | 21.306 | 20.248 | 6.985  | 1.00 | 73.36 |
| ATOM | 1622 | OD2 | ASP | 1652 | 20.646 | 20.034 | 9.060  | 1.00 | 76.01 |
| ATOM | 1623 | C   | ASP | 1652 | 20.802 | 17.023 | 5.673  | 1.00 | 66.08 |
| ATOM | 1624 | O   | ASP | 1652 | 20.746 | 16.457 | 7.762  | 1.00 | 64.92 |
| ATOM | 1625 | N   | TYR | 1653 | 21.802 | 16.856 | 5.814  | 1.00 | 64.14 |
| ATOM | 1627 | CA  | TYR | 1653 | 22.926 | 15.968 | 6.089  | 1.00 | 63.02 |
| ATOM | 1628 | CB  | TYR | 1653 | 23.852 | 15.906 | 4.875  | 1.00 | 61.29 |
| ATOM | 1629 | CG  | TYR | 1653 | 23.362 | 14.971 | 3.795  | 1.00 | 62.37 |
| ATOM | 1630 | CD1 | TYR | 1653 | 24.153 | 14.679 | 2.684  | 1.00 | 61.11 |
| ATOM | 1631 | CE1 | TYR | 1653 | 23.725 | 13.773 | 1.717  | 1.00 | 62.89 |
| ATOM | 1632 | CD2 | TYR | 1653 | 22.121 | 14.335 | 3.910  | 1.00 | 64.11 |
| ATOM | 1633 | CE2 | TYR | 1653 | 21.685 | 13.429 | 2.953  | 1.00 | 66.09 |
| ATOM | 1634 | CZ  | TYR | 1653 | 22.487 | 13.148 | 1.859  | 1.00 | 65.03 |
| ATOM | 1635 | OH  | TYR | 1653 | 22.044 | 12.239 | 0.921  | 1.00 | 65.78 |
| ATOM | 1637 | C   | TYR | 1653 | 23.733 | 16.313 | 7.345  | 1.00 | 63.49 |
| ATOM | 1638 | O   | TYR | 1653 | 24.403 | 15.453 | 7.912  | 1.00 | 63.39 |
| ATOM | 1639 | N   | TYR | 1654 | 23.644 | 17.564 | 7.789  | 1.00 | 64.37 |
| ATOM | 1641 | CA  | TYR | 1654 | 24.379 | 18.013 | 8.963  | 1.00 | 63.95 |
| ATOM | 1642 | CB  | TYR | 1654 | 24.947 | 19.417 | 8.741  | 1.00 | 60.86 |
| ATOM | 1643 | CG  | TYR | 1654 | 26.038 | 19.467 | 7.691  | 1.00 | 57.70 |
| ATOM | 1644 | CD1 | TYR | 1654 | 25.736 | 19.698 | 6.353  | 1.00 | 58.03 |
| ATOM | 1645 | CE1 | TYR | 1654 | 26.734 | 19.708 | 5.383  | 1.00 | 60.65 |
| ATOM | 1646 | CD2 | TYR | 1654 | 27.364 | 19.252 | 8.035  | 1.00 | 56.79 |
| ATOM | 1647 | CE2 | TYR | 1654 | 28.366 | 19.261 | 7.079  | 1.00 | 58.85 |
| ATOM | 1648 | CZ  | TYR | 1654 | 28.047 | 19.488 | 5.754  | 1.00 | 60.88 |
| ATOM | 1649 | OH  | TYR | 1654 | 29.048 | 19.485 | 4.806  | 1.00 | 64.23 |
| ATOM | 1651 | C   | TYR | 1654 | 23.560 | 17.980 | 10.239 | 1.00 | 65.89 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1652 | O   | TYR | 1654 | 24.074 | 18.283 | 11.316 | 1.00 | 67.56 |
| ATOM | 1653 | N   | LYS | 1655 | 22.297 | 17.586 | 10.135 | 1.00 | 67.36 |
| ATOM | 1655 | CA  | LYS | 1655 | 21.443 | 17.527 | 11.315 | 1.00 | 69.11 |
| ATOM | 1656 | CB  | LYS | 1655 | 19.972 | 17.611 | 10.915 | 1.00 | 69.86 |
| ATOM | 1657 | CG  | LYS | 1655 | 19.019 | 17.651 | 12.090 | 1.00 | 71.45 |
| ATOM | 1658 | CD  | LYS | 1655 | 17.607 | 17.867 | 11.603 | 1.00 | 75.40 |
| ATOM | 1659 | CE  | LYS | 1655 | 16.595 | 17.393 | 12.627 | 1.00 | 78.22 |
| ATOM | 1660 | NZ  | LYS | 1655 | 15.204 | 17.553 | 12.110 | 1.00 | 80.61 |
| ATOM | 1664 | C   | LYS | 1655 | 21.714 | 16.242 | 12.093 | 1.00 | 69.65 |
| ATOM | 1665 | O   | LYS | 1655 | 21.872 | 15.169 | 11.497 | 1.00 | 70.67 |
| ATOM | 1666 | N   | LYS | 1656 | 21.766 | 16.358 | 13.419 | 1.00 | 68.19 |
| ATOM | 1668 | CA  | LYS | 1656 | 22.035 | 15.212 | 14.275 | 1.00 | 68.00 |
| ATOM | 1669 | CB  | LYS | 1656 | 22.983 | 15.618 | 15.403 | 1.00 | 65.53 |
| ATOM | 1670 | CG  | LYS | 1656 | 24.395 | 15.895 | 14.946 | 1.00 | 62.71 |
| ATOM | 1671 | CD  | LYS | 1656 | 25.280 | 16.221 | 16.138 | 1.00 | 64.38 |
| ATOM | 1672 | CE  | LYS | 1656 | 26.764 | 16.031 | 15.832 | 1.00 | 63.23 |
| ATOM | 1673 | NZ  | LYS | 1656 | 27.592 | 16.186 | 17.062 | 1.00 | 61.72 |
| ATOM | 1677 | C   | LYS | 1656 | 20.777 | 14.560 | 14.855 | 1.00 | 68.73 |
| ATOM | 1678 | O   | LYS | 1656 | 19.695 | 15.148 | 14.837 | 1.00 | 69.20 |
| ATOM | 1679 | N   | THR | 1657 | 20.928 | 13.337 | 15.359 | 1.00 | 68.48 |
| ATOM | 1681 | CA  | THR | 1657 | 19.821 | 12.607 | 15.960 | 1.00 | 67.93 |
| ATOM | 1682 | CB  | THR | 1657 | 20.109 | 11.078 | 16.021 | 1.00 | 68.93 |
| ATOM | 1683 | OG1 | THR | 1657 | 21.295 | 10.823 | 16.787 | 1.00 | 68.72 |
| ATOM | 1685 | CG2 | THR | 1657 | 20.289 | 10.500 | 14.637 | 1.00 | 68.83 |
| ATOM | 1686 | C   | THR | 1657 | 19.682 | 13.131 | 17.383 | 1.00 | 67.80 |
| ATOM | 1687 | O   | THR | 1657 | 20.424 | 14.022 | 17.790 | 1.00 | 67.87 |
| ATOM | 1688 | N   | ALA | 1658 | 18.753 | 12.569 | 18.148 | 1.00 | 68.95 |
| ATOM | 1690 | CA  | ALA | 1658 | 18.580 | 12.992 | 19.537 | 1.00 | 70.64 |
| ATOM | 1691 | CB  | ALA | 1658 | 17.391 | 12.254 | 20.173 | 1.00 | 71.19 |
| ATOM | 1692 | C   | ALA | 1658 | 19.880 | 12.709 | 20.313 | 1.00 | 69.64 |
| ATOM | 1693 | O   | ALA | 1658 | 20.394 | 13.566 | 21.042 | 1.00 | 70.13 |
| ATOM | 1694 | N   | ASN | 1659 | 20.440 | 11.526 | 20.080 | 1.00 | 68.02 |
| ATOM | 1696 | CA  | ASN | 1659 | 21.663 | 11.092 | 20.746 | 1.00 | 66.10 |
| ATOM | 1697 | CB  | ASN | 1659 | 21.835 | 9.583  | 20.557 | 1.00 | 70.23 |
| ATOM | 1698 | CG  | ASN | 1659 | 22.632 | 8.937  | 21.679 | 1.00 | 74.09 |
| ATOM | 1699 | OD1 | ASN | 1659 | 22.525 | 9.331  | 22.840 | 1.00 | 75.21 |
| ATOM | 1700 | ND2 | ASN | 1659 | 23.402 | 7.907  | 21.342 | 1.00 | 75.03 |
| ATOM | 1703 | C   | ASN | 1659 | 22.910 | 11.816 | 20.249 | 1.00 | 63.30 |
| ATOM | 1704 | O   | ASN | 1659 | 24.004 | 11.585 | 20.762 | 1.00 | 61.12 |
| ATOM | 1705 | N   | GLY | 1660 | 22.744 | 12.678 | 19.246 | 1.00 | 61.61 |
| ATOM | 1707 | CA  | GLY | 1660 | 23.867 | 13.421 | 18.689 | 1.00 | 59.06 |
| ATOM | 1708 | C   | GLY | 1660 | 24.604 | 12.750 | 17.536 | 1.00 | 56.84 |
| ATOM | 1709 | O   | GLY | 1660 | 25.726 | 13.132 | 17.196 | 1.00 | 55.69 |
| ATOM | 1710 | N   | ARG | 1661 | 23.980 | 11.758 | 16.914 | 1.00 | 55.73 |
| ATOM | 1712 | CA  | ARG | 1661 | 24.626 | 11.062 | 15.808 | 1.00 | 52.76 |
| ATOM | 1713 | CB  | ARG | 1661 | 24.387 | 9.549  | 15.883 | 1.00 | 52.39 |
| ATOM | 1714 | CG  | ARG | 1661 | 24.977 | 8.874  | 17.111 | 1.00 | 54.08 |
| ATOM | 1715 | CD  | ARG | 1661 | 24.776 | 7.376  | 17.045 | 1.00 | 58.37 |
| ATOM | 1716 | NE  | ARG | 1661 | 25.178 | 6.665  | 18.260 | 1.00 | 59.27 |
| ATOM | 1718 | CZ  | ARG | 1661 | 24.952 | 5.369  | 18.471 | 1.00 | 59.83 |
| ATOM | 1719 | NH1 | ARG | 1661 | 24.319 | 4.643  | 17.550 | 1.00 | 57.04 |
| ATOM | 1722 | NH2 | ARG | 1661 | 25.375 | 4.792  | 19.591 | 1.00 | 59.47 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1725 | C   | ARG | 1661 | 24.167 | 11.609 | 14.468 | 1.00 | 49.58 |
| ATOM | 1726 | O   | ARG | 1661 | 23.169 | 12.321 | 14.375 | 1.00 | 47.38 |
| ATOM | 1727 | N   | LEU | 1662 | 24.911 | 11.266 | 13.430 | 1.00 | 46.26 |
| ATOM | 1729 | CA  | LEU | 1662 | 24.600 | 11.717 | 12.092 | 1.00 | 44.75 |
| ATOM | 1730 | CB  | LEU | 1662 | 25.871 | 12.261 | 11.425 | 1.00 | 43.49 |
| ATOM | 1731 | CG  | LEU | 1662 | 26.430 | 13.561 | 12.020 | 1.00 | 43.01 |
| ATOM | 1732 | CD1 | LEU | 1662 | 27.918 | 13.705 | 11.727 | 1.00 | 42.40 |
| ATOM | 1733 | CD2 | LEU | 1662 | 25.644 | 14.760 | 11.507 | 1.00 | 40.19 |
| ATOM | 1734 | C   | LEU | 1662 | 23.999 | 10.570 | 11.276 | 1.00 | 43.58 |
| ATOM | 1735 | O   | LEU | 1662 | 24.704 | 9.628  | 10.892 | 1.00 | 43.68 |
| ATOM | 1736 | N   | PRO | 1663 | 22.680 | 10.631 | 11.010 | 1.00 | 40.72 |
| ATOM | 1737 | CD  | PRO | 1663 | 21.723 | 11.629 | 11.521 | 1.00 | 40.27 |
| ATOM | 1738 | CA  | PRO | 1663 | 21.981 | 9.603  | 10.237 | 1.00 | 36.86 |
| ATOM | 1739 | CB  | PRO | 1663 | 20.595 | 10.214 | 10.035 | 1.00 | 36.67 |
| ATOM | 1740 | CG  | PRO | 1663 | 20.375 | 10.937 | 11.314 | 1.00 | 36.84 |
| ATOM | 1741 | C   | PRO | 1663 | 22.640 | 9.266  | 8.907  | 1.00 | 33.34 |
| ATOM | 1742 | O   | PRO | 1663 | 22.442 | 8.161  | 8.401  | 1.00 | 33.65 |
| ATOM | 1743 | N   | VAL | 1664 | 23.427 | 10.188 | 8.343  | 1.00 | 31.26 |
| ATOM | 1745 | CA  | VAL | 1664 | 24.095 | 9.915  | 7.058  | 1.00 | 30.43 |
| ATOM | 1746 | CB  | VAL | 1664 | 24.887 | 11.125 | 6.466  | 1.00 | 27.09 |
| ATOM | 1747 | CG1 | VAL | 1664 | 23.947 | 12.199 | 6.040  | 1.00 | 23.98 |
| ATOM | 1748 | CG2 | VAL | 1664 | 25.894 | 11.654 | 7.464  | 1.00 | 26.06 |
| ATOM | 1749 | C   | VAL | 1664 | 25.044 | 8.728  | 7.163  | 1.00 | 28.18 |
| ATOM | 1750 | O   | VAL | 1664 | 25.461 | 8.179  | 6.153  | 1.00 | 28.30 |
| ATOM | 1751 | N   | LYS | 1665 | 25.353 | 8.326  | 8.389  | 1.00 | 25.52 |
| ATOM | 1753 | CA  | LYS | 1665 | 26.243 | 7.200  | 8.612  | 1.00 | 25.48 |
| ATOM | 1754 | CB  | LYS | 1665 | 26.915 | 7.334  | 9.979  | 1.00 | 23.52 |
| ATOM | 1755 | CG  | LYS | 1665 | 27.910 | 8.452  | 10.001 | 1.00 | 23.14 |
| ATOM | 1756 | CD  | LYS | 1665 | 28.363 | 8.776  | 11.400 | 1.00 | 29.84 |
| ATOM | 1757 | CE  | LYS | 1665 | 29.430 | 9.871  | 11.385 | 1.00 | 28.33 |
| ATOM | 1758 | NZ  | LYS | 1665 | 29.794 | 10.283 | 12.777 | 1.00 | 30.88 |
| ATOM | 1762 | C   | LYS | 1665 | 25.595 | 5.823  | 8.413  | 1.00 | 25.26 |
| ATOM | 1763 | O   | LYS | 1665 | 26.261 | 4.798  | 8.512  | 1.00 | 23.05 |
| ATOM | 1764 | N   | TRP | 1666 | 24.289 | 5.815  | 8.156  | 1.00 | 27.05 |
| ATOM | 1766 | CA  | TRP | 1666 | 23.543 | 4.588  | 7.884  | 1.00 | 27.17 |
| ATOM | 1767 | CB  | TRP | 1666 | 22.282 | 4.529  | 8.760  | 1.00 | 26.98 |
| ATOM | 1768 | CG  | TRP | 1666 | 22.563 | 4.067  | 10.197 | 1.00 | 29.62 |
| ATOM | 1769 | CD2 | TRP | 1666 | 23.065 | 4.857  | 11.283 | 1.00 | 29.64 |
| ATOM | 1770 | CE2 | TRP | 1666 | 23.230 | 3.988  | 12.393 | 1.00 | 28.25 |
| ATOM | 1771 | CE3 | TRP | 1666 | 23.406 | 6.208  | 11.430 | 1.00 | 29.15 |
| ATOM | 1772 | CD1 | TRP | 1666 | 22.436 | 2.793  | 10.690 | 1.00 | 26.48 |
| ATOM | 1773 | NE1 | TRP | 1666 | 22.834 | 2.737  | 11.997 | 1.00 | 24.81 |
| ATOM | 1775 | CZ2 | TRP | 1666 | 23.719 | 4.430  | 13.636 | 1.00 | 28.40 |
| ATOM | 1776 | CZ3 | TRP | 1666 | 23.894 | 6.647  | 12.670 | 1.00 | 29.38 |
| ATOM | 1777 | CH2 | TRP | 1666 | 24.048 | 5.756  | 13.749 | 1.00 | 29.83 |
| ATOM | 1778 | C   | TRP | 1666 | 23.176 | 4.499  | 6.385  | 1.00 | 27.71 |
| ATOM | 1779 | O   | TRP | 1666 | 22.745 | 3.451  | 5.900  | 1.00 | 29.42 |
| ATOM | 1780 | N   | MET | 1667 | 23.439 | 5.572  | 5.645  | 1.00 | 25.52 |
| ATOM | 1782 | CA  | MET | 1667 | 23.098 | 5.642  | 4.232  | 1.00 | 25.24 |
| ATOM | 1783 | CB  | MET | 1667 | 22.972 | 7.095  | 3.792  | 1.00 | 26.58 |
| ATOM | 1784 | CG  | MET | 1667 | 21.830 | 7.836  | 4.391  | 1.00 | 32.35 |
| ATOM | 1785 | SD  | MET | 1667 | 21.846 | 9.559  | 3.877  | 1.00 | 40.32 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1786 | CE  | MET | 1667 | 21.033 | 9.447  | 2.341  | 1.00 | 38.17 |
| ATOM | 1787 | C   | MET | 1667 | 24.042 | 4.960  | 3.276  | 1.00 | 25.07 |
| ATOM | 1788 | O   | MET | 1667 | 25.256 | 5.037  | 3.411  | 1.00 | 27.61 |
| ATOM | 1789 | N   | ALA | 1668 | 23.473 | 4.302  | 2.282  | 1.00 | 24.92 |
| ATOM | 1791 | CA  | ALA | 1668 | 24.272 | 3.647  | 1.271  | 1.00 | 26.92 |
| ATOM | 1792 | CB  | ALA | 1668 | 23.397 | 2.720  | 0.425  | 1.00 | 25.09 |
| ATOM | 1793 | C   | ALA | 1668 | 24.866 | 4.759  | 0.410  | 1.00 | 27.82 |
| ATOM | 1794 | O   | ALA | 1668 | 24.254 | 5.817  | 0.242  | 1.00 | 27.06 |
| ATOM | 1795 | N   | PRO | 1669 | 26.050 | 4.530  | -0.170 | 1.00 | 27.84 |
| ATOM | 1796 | CD  | PRO | 1669 | 26.912 | 3.339  | -0.107 | 1.00 | 27.12 |
| ATOM | 1797 | CA  | PRO | 1669 | 26.662 | 5.561  | -1.005 | 1.00 | 28.04 |
| ATOM | 1798 | CB  | PRO | 1669 | 27.868 | 4.835  | -1.593 | 1.00 | 26.71 |
| ATOM | 1799 | CG  | PRO | 1669 | 28.249 | 3.893  | -0.498 | 1.00 | 27.49 |
| ATOM | 1800 | C   | PRO | 1669 | 25.734 | 6.078  | -2.108 | 1.00 | 28.51 |
| ATOM | 1801 | O   | PRO | 1669 | 25.685 | 7.281  | -2.371 | 1.00 | 30.64 |
| ATOM | 1802 | N   | GLU | 1670 | 24.992 | 5.179  | -2.746 | 1.00 | 28.25 |
| ATOM | 1804 | CA  | GLU | 1670 | 24.095 | 5.584  | -3.826 | 1.00 | 26.82 |
| ATOM | 1805 | CB  | GLU | 1670 | 23.600 | 4.369  | -4.620 | 1.00 | 29.32 |
| ATOM | 1806 | CG  | GLU | 1670 | 22.604 | 3.486  | -3.889 | 1.00 | 30.38 |
| ATOM | 1807 | CD  | GLU | 1670 | 23.223 | 2.266  | -3.229 | 1.00 | 32.52 |
| ATOM | 1808 | OE1 | GLU | 1670 | 22.444 | 1.393  | -2.794 | 1.00 | 28.06 |
| ATOM | 1809 | OE2 | GLU | 1670 | 24.474 | 2.175  | -3.130 | 1.00 | 28.67 |
| ATOM | 1810 | C   | GLU | 1670 | 22.924 | 6.440  | -3.356 | 1.00 | 24.79 |
| ATOM | 1811 | O   | GLU | 1670 | 22.410 | 7.236  | -4.123 | 1.00 | 22.31 |
| ATOM | 1812 | N   | ALA | 1671 | 22.512 | 6.265  | -2.101 | 1.00 | 26.70 |
| ATOM | 1814 | CA  | ALA | 1671 | 21.423 | 7.040  | -1.490 | 1.00 | 25.67 |
| ATOM | 1815 | CB  | ALA | 1671 | 20.813 | 6.292  | -0.312 | 1.00 | 18.88 |
| ATOM | 1816 | C   | ALA | 1671 | 21.984 | 8.365  | -1.066 | 1.00 | 26.05 |
| ATOM | 1817 | O   | ALA | 1671 | 21.400 | 9.414  | -1.229 | 1.00 | 28.14 |
| ATOM | 1818 | N   | LEU | 1672 | 23.138 | 8.300  | -0.358 | 1.00 | 29.03 |
| ATOM | 1820 | CA  | LEU | 1672 | 23.807 | 9.481  | 0.172  | 1.00 | 34.07 |
| ATOM | 1821 | CB  | LEU | 1672 | 25.030 | 9.064  | 0.986  | 1.00 | 34.45 |
| ATOM | 1822 | CG  | LEU | 1672 | 25.870 | 10.157 | 1.648  | 1.00 | 39.50 |
| ATOM | 1823 | CD1 | LEU | 1672 | 25.081 | 10.853 | 2.740  | 1.00 | 41.71 |
| ATOM | 1824 | CD2 | LEU | 1672 | 27.123 | 9.530  | 2.243  | 1.00 | 40.16 |
| ATOM | 1825 | C   | LEU | 1672 | 24.248 | 10.431 | -0.942 | 1.00 | 38.47 |
| ATOM | 1826 | O   | LEU | 1672 | 23.958 | 11.625 | -0.898 | 1.00 | 42.25 |
| ATOM | 1827 | N   | PHE | 1673 | 24.924 | 9.901  | -1.956 | 1.00 | 39.07 |
| ATOM | 1829 | CA  | PHE | 1673 | 25.414 | 10.725 | -3.053 | 1.00 | 38.00 |
| ATOM | 1830 | CB  | PHE | 1673 | 26.699 | 10.110 | -3.639 | 1.00 | 36.48 |
| ATOM | 1831 | CG  | PHE | 1673 | 27.826 | 9.928  | -2.637 | 1.00 | 33.36 |
| ATOM | 1832 | CD1 | PHE | 1673 | 28.524 | 8.724  | -2.580 | 1.00 | 29.55 |
| ATOM | 1833 | CD2 | PHE | 1673 | 28.205 | 10.960 | -1.779 | 1.00 | 31.85 |
| ATOM | 1834 | CE1 | PHE | 1673 | 29.580 | 8.540  | -1.692 | 1.00 | 26.33 |
| ATOM | 1835 | CE2 | PHE | 1673 | 29.265 | 10.786 | -0.880 | 1.00 | 30.95 |
| ATOM | 1836 | CZ  | PHE | 1673 | 29.954 | 9.568  | -0.838 | 1.00 | 28.99 |
| ATOM | 1837 | C   | PHE | 1673 | 24.413 | 10.957 | -4.194 | 1.00 | 39.64 |
| ATOM | 1838 | O   | PHE | 1673 | 24.364 | 12.046 | -4.760 | 1.00 | 37.72 |
| ATOM | 1839 | N   | ASP | 1674 | 23.651 | 9.928  | -4.554 | 1.00 | 41.35 |
| ATOM | 1841 | CA  | ASP | 1674 | 22.716 | 10.027 | -5.666 | 1.00 | 43.38 |
| ATOM | 1842 | CB  | ASP | 1674 | 22.934 | 8.858  | -6.625 | 1.00 | 47.84 |
| ATOM | 1843 | CG  | ASP | 1674 | 24.359 | 8.765  | -7.121 | 1.00 | 53.24 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1844 | OD1 | ASP | 1674 | 25.049 | 9.808  | -7.172 | 1.00 | 56.20 |
| ATOM | 1845 | OD2 | ASP | 1674 | 24.786 | 7.640  | -7.460 | 1.00 | 55.73 |
| ATOM | 1846 | C   | ASP | 1674 | 21.239 | 10.083 | -5.321 | 1.00 | 45.94 |
| ATOM | 1847 | O   | ASP | 1674 | 20.402 | 10.200 | -6.222 | 1.00 | 47.80 |
| ATOM | 1848 | N   | ARG | 1675 | 20.903 | 9.953  | -4.040 | 1.00 | 45.98 |
| ATOM | 1850 | CA  | ARG | 1675 | 19.503 | 9.981  | -3.608 | 1.00 | 43.76 |
| ATOM | 1851 | CB  | ARG | 1675 | 18.872 | 11.346 | -3.887 | 1.00 | 48.61 |
| ATOM | 1852 | CG  | ARG | 1675 | 19.519 | 12.478 | -3.142 | 1.00 | 58.37 |
| ATOM | 1853 | CD  | ARG | 1675 | 19.468 | 13.715 | -3.992 | 1.00 | 70.39 |
| ATOM | 1854 | NE  | ARG | 1675 | 20.035 | 14.867 | -3.306 | 1.00 | 79.14 |
| ATOM | 1856 | CZ  | ARG | 1675 | 19.612 | 16.116 | -3.472 | 1.00 | 82.95 |
| ATOM | 1857 | NH1 | ARG | 1675 | 18.610 | 16.386 | -4.308 | 1.00 | 82.00 |
| ATOM | 1860 | NH2 | ARG | 1675 | 20.194 | 17.097 | -2.793 | 1.00 | 87.42 |
| ATOM | 1863 | C   | ARG | 1675 | 18.647 | 8.882  | -4.236 | 1.00 | 39.26 |
| ATOM | 1864 | O   | ARG | 1675 | 17.461 | 9.074  | -4.488 | 1.00 | 37.29 |
| ATOM | 1865 | N   | ILE | 1676 | 19.270 | 7.746  | -4.526 | 1.00 | 35.86 |
| ATOM | 1867 | CA  | ILE | 1676 | 18.544 | 6.614  | -5.081 | 1.00 | 32.76 |
| ATOM | 1868 | CB  | ILE | 1676 | 19.324 | 5.927  | -6.192 | 1.00 | 31.73 |
| ATOM | 1869 | CG2 | ILE | 1676 | 18.450 | 4.902  | -6.868 | 1.00 | 30.02 |
| ATOM | 1870 | CG1 | ILE | 1676 | 19.767 | 6.955  | -7.219 | 1.00 | 32.68 |
| ATOM | 1871 | CD1 | ILE | 1676 | 20.658 | 6.371  | -8.272 | 1.00 | 35.75 |
| ATOM | 1872 | C   | ILE | 1676 | 18.329 | 5.625  | -3.946 | 1.00 | 31.08 |
| ATOM | 1873 | O   | ILE | 1676 | 19.264 | 4.962  | -3.505 | 1.00 | 28.77 |
| ATOM | 1874 | N   | TYR | 1677 | 17.102 | 5.558  | -3.444 | 1.00 | 30.32 |
| ATOM | 1876 | CA  | TYR | 1677 | 16.779 | 4.653  | -2.348 | 1.00 | 29.68 |
| ATOM | 1877 | CB  | TYR | 1677 | 15.846 | 5.329  | -1.354 | 1.00 | 31.14 |
| ATOM | 1878 | CG  | TYR | 1677 | 16.523 | 6.395  | -0.514 | 1.00 | 32.95 |
| ATOM | 1879 | CD1 | TYR | 1677 | 16.616 | 7.721  | -0.958 | 1.00 | 30.40 |
| ATOM | 1880 | CE1 | TYR | 1677 | 17.208 | 8.707  | -0.171 | 1.00 | 27.57 |
| ATOM | 1881 | CD2 | TYR | 1677 | 17.048 | 6.082  | 0.743  | 1.00 | 32.13 |
| ATOM | 1882 | CE2 | TYR | 1677 | 17.642 | 7.059  | 1.543  | 1.00 | 31.50 |
| ATOM | 1883 | CZ  | TYR | 1677 | 17.711 | 8.366  | 1.081  | 1.00 | 31.12 |
| ATOM | 1884 | OH  | TYR | 1677 | 18.235 | 9.326  | 1.912  | 1.00 | 32.18 |
| ATOM | 1886 | C   | TYR | 1677 | 16.123 | 3.424  | -2.933 | 1.00 | 28.88 |
| ATOM | 1887 | O   | TYR | 1677 | 15.268 | 3.537  | -3.811 | 1.00 | 32.20 |
| ATOM | 1888 | N   | THR | 1678 | 16.556 | 2.253  | -2.481 | 1.00 | 26.34 |
| ATOM | 1890 | CA  | THR | 1678 | 16.023 | 0.988  | -2.971 | 1.00 | 25.55 |
| ATOM | 1891 | CB  | THR | 1678 | 16.917 | 0.394  | -4.043 | 1.00 | 28.81 |
| ATOM | 1892 | OG1 | THR | 1678 | 18.221 | 0.179  | -3.483 | 1.00 | 34.06 |
| ATOM | 1894 | CG2 | THR | 1678 | 17.010 | 1.320  | -5.267 | 1.00 | 27.25 |
| ATOM | 1895 | C   | THR | 1678 | 16.037 | 0.007  | -1.827 | 1.00 | 21.78 |
| ATOM | 1896 | O   | THR | 1678 | 16.505 | 0.312  | -0.744 | 1.00 | 25.57 |
| ATOM | 1897 | N   | HIS | 1679 | 15.559 | -1.198 | -2.071 | 1.00 | 20.86 |
| ATOM | 1899 | CA  | HIS | 1679 | 15.580 | -2.216 | -1.030 | 1.00 | 20.30 |
| ATOM | 1900 | CB  | HIS | 1679 | 14.816 | -3.453 | -1.499 | 1.00 | 17.22 |
| ATOM | 1901 | CG  | HIS | 1679 | 13.367 | -3.196 | -1.797 | 1.00 | 19.02 |
| ATOM | 1902 | CD2 | HIS | 1679 | 12.662 | -3.275 | -2.958 | 1.00 | 14.89 |
| ATOM | 1903 | ND1 | HIS | 1679 | 12.459 | -2.830 | -0.826 | 1.00 | 18.98 |
| ATOM | 1905 | CE1 | HIS | 1679 | 11.260 | -2.697 | -1.370 | 1.00 | 16.10 |
| ATOM | 1906 | NE2 | HIS | 1679 | 11.359 | -2.961 | -2.663 | 1.00 | 15.18 |
| ATOM | 1908 | C   | HIS | 1679 | 17.050 | -2.535 | -0.761 | 1.00 | 20.44 |
| ATOM | 1909 | O   | HIS | 1679 | 17.428 | -2.901 | 0.356  | 1.00 | 22.58 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1910 | N   | GLN | 1680 | 17.874 | -2.310 | -1.781 | 1.00 | 20.58 |
| ATOM | 1912 | CA  | GLN | 1680 | 19.303 | -2.539 | -1.721 | 1.00 | 22.70 |
| ATOM | 1913 | CB  | GLN | 1680 | 19.935 | -2.427 | -3.106 | 1.00 | 26.26 |
| ATOM | 1914 | CG  | GLN | 1680 | 19.934 | -3.711 | -3.889 | 1.00 | 31.86 |
| ATOM | 1915 | CD  | GLN | 1680 | 18.949 | -3.687 | -5.026 | 1.00 | 37.54 |
| ATOM | 1916 | OE1 | GLN | 1680 | 17.931 | -3.000 | -4.961 | 1.00 | 42.70 |
| ATOM | 1917 | NE2 | GLN | 1680 | 19.256 | -4.409 | -6.091 | 1.00 | 37.42 |
| ATOM | 1920 | C   | GLN | 1680 | 19.985 | -1.559 | -0.797 | 1.00 | 24.93 |
| ATOM | 1921 | O   | GLN | 1680 | 20.875 | -1.943 | -0.039 | 1.00 | 26.39 |
| ATOM | 1922 | N   | SER | 1681 | 19.605 | -0.286 | -0.867 | 1.00 | 24.70 |
| ATOM | 1924 | CA  | SER | 1681 | 20.239 | 0.678  | 0.030  | 1.00 | 23.24 |
| ATOM | 1925 | CB  | SER | 1681 | 19.923 | 2.128  | -0.346 | 1.00 | 19.33 |
| ATOM | 1926 | OG  | SER | 1681 | 18.544 | 2.326  | -0.545 | 1.00 | 18.55 |
| ATOM | 1928 | C   | SER | 1681 | 19.852 | 0.364  | 1.464  | 1.00 | 21.77 |
| ATOM | 1929 | O   | SER | 1681 | 20.645 | 0.609  | 2.366  | 1.00 | 24.14 |
| ATOM | 1930 | N   | ASP | 1682 | 18.659 | -0.210 | 1.670  | 1.00 | 21.80 |
| ATOM | 1932 | CA  | ASP | 1682 | 18.180 | -0.604 | 3.003  | 1.00 | 22.45 |
| ATOM | 1933 | CB  | ASP | 1682 | 16.730 | -1.111 | 2.963  | 1.00 | 25.27 |
| ATOM | 1934 | CG  | ASP | 1682 | 15.678 | 0.004  | 3.132  | 1.00 | 28.21 |
| ATOM | 1935 | OD1 | ASP | 1682 | 14.500 | -0.245 | 2.786  | 1.00 | 25.41 |
| ATOM | 1936 | OD2 | ASP | 1682 | 15.992 | 1.102  | 3.639  | 1.00 | 30.19 |
| ATOM | 1937 | C   | ASP | 1682 | 19.076 | -1.736 | 3.517  | 1.00 | 23.69 |
| ATOM | 1938 | O   | ASP | 1682 | 19.385 | -1.799 | 4.709  | 1.00 | 24.74 |
| ATOM | 1939 | N   | VAL | 1683 | 19.474 | -2.635 | 2.620  | 1.00 | 23.49 |
| ATOM | 1941 | CA  | VAL | 1683 | 20.354 | -3.737 | 3.003  | 1.00 | 21.77 |
| ATOM | 1942 | CB  | VAL | 1683 | 20.543 | -4.741 | 1.837  | 1.00 | 20.49 |
| ATOM | 1943 | CG1 | VAL | 1683 | 21.770 | -5.613 | 2.039  | 1.00 | 19.82 |
| ATOM | 1944 | CG2 | VAL | 1683 | 19.320 | -5.618 | 1.736  | 1.00 | 19.29 |
| ATOM | 1945 | C   | VAL | 1683 | 21.674 | -3.153 | 3.523  | 1.00 | 21.93 |
| ATOM | 1946 | O   | VAL | 1683 | 22.161 | -3.570 | 4.573  | 1.00 | 21.06 |
| ATOM | 1947 | N   | TRP | 1684 | 22.207 | -2.143 | 2.837  | 1.00 | 20.64 |
| ATOM | 1949 | CA  | TRP | 1684 | 23.424 | -1.482 | 3.295  | 1.00 | 20.98 |
| ATOM | 1950 | CB  | TRP | 1684 | 23.711 | -0.224 | 2.463  | 1.00 | 19.56 |
| ATOM | 1951 | CG  | TRP | 1684 | 24.859 | 0.609  | 2.970  | 1.00 | 23.22 |
| ATOM | 1952 | CD2 | TRP | 1684 | 26.182 | 0.686  | 2.421  | 1.00 | 24.64 |
| ATOM | 1953 | CE2 | TRP | 1684 | 26.929 | 1.559  | 3.249  | 1.00 | 24.69 |
| ATOM | 1954 | CE3 | TRP | 1684 | 26.813 | 0.102  | 1.315  | 1.00 | 26.41 |
| ATOM | 1955 | CD1 | TRP | 1684 | 24.857 | 1.430  | 4.075  | 1.00 | 23.64 |
| ATOM | 1956 | NE1 | TRP | 1684 | 26.097 | 1.994  | 4.246  | 1.00 | 23.28 |
| ATOM | 1958 | CZ2 | TRP | 1684 | 28.275 | 1.859  | 3.000  | 1.00 | 20.55 |
| ATOM | 1959 | CZ3 | TRP | 1684 | 28.165 | 0.409  | 1.072  | 1.00 | 22.82 |
| ATOM | 1960 | CH2 | TRP | 1684 | 28.872 | 1.274  | 1.908  | 1.00 | 19.24 |
| ATOM | 1961 | C   | TRP | 1684 | 23.201 | -1.112 | 4.771  | 1.00 | 21.12 |
| ATOM | 1962 | O   | TRP | 1684 | 23.931 | -1.560 | 5.652  | 1.00 | 22.08 |
| ATOM | 1963 | N   | SER | 1685 | 22.150 | -0.342 | 5.032  | 1.00 | 23.27 |
| ATOM | 1965 | CA  | SER | 1685 | 21.787 | 0.086  | 6.386  | 1.00 | 22.54 |
| ATOM | 1966 | CB  | SER | 1685 | 20.429 | 0.768  | 6.356  | 1.00 | 21.98 |
| ATOM | 1967 | OG  | SER | 1685 | 20.318 | 1.626  | 5.220  | 1.00 | 25.48 |
| ATOM | 1969 | C   | SER | 1685 | 21.747 | -1.068 | 7.389  | 1.00 | 21.33 |
| ATOM | 1970 | O   | SER | 1685 | 22.145 | -0.902 | 8.545  | 1.00 | 19.52 |
| ATOM | 1971 | N   | PHE | 1686 | 21.260 | -2.228 | 6.946  | 1.00 | 23.10 |
| ATOM | 1973 | CA  | PHE | 1686 | 21.174 | -3.424 | 7.800  | 1.00 | 23.09 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1974 | CB  | PHE | 1686 | 20.409 | -4.550 | 7.095  | 1.00 | 22.77 |
| ATOM | 1975 | CG  | PHE | 1686 | 20.192 | -5.767 | 7.962  | 1.00 | 25.82 |
| ATOM | 1976 | CD1 | PHE | 1686 | 19.378 | -5.694 | 9.096  | 1.00 | 25.54 |
| ATOM | 1977 | CD2 | PHE | 1686 | 20.808 | -6.987 | 7.649  | 1.00 | 23.88 |
| ATOM | 1978 | CE1 | PHE | 1686 | 19.185 | -6.809 | 9.913  | 1.00 | 24.25 |
| ATOM | 1979 | CE2 | PHE | 1686 | 20.622 | -8.109 | 8.455  | 1.00 | 22.67 |
| ATOM | 1980 | CZ  | PHE | 1686 | 19.809 | -8.023 | 9.585  | 1.00 | 26.30 |
| ATOM | 1981 | C   | PHE | 1686 | 22.569 | -3.919 | 8.240  | 1.00 | 21.77 |
| ATOM | 1982 | O   | PHE | 1686 | 22.739 | -4.450 | 9.350  | 1.00 | 20.47 |
| ATOM | 1983 | N   | GLY | 1687 | 23.553 | -3.773 | 7.358  | 1.00 | 20.63 |
| ATOM | 1985 | CA  | GLY | 1687 | 24.913 | -4.163 | 7.685  | 1.00 | 19.29 |
| ATOM | 1986 | C   | GLY | 1687 | 25.407 | -3.276 | 8.822  | 1.00 | 21.64 |
| ATOM | 1987 | O   | GLY | 1687 | 26.094 | -3.755 | 9.727  | 1.00 | 19.46 |
| ATOM | 1988 | N   | VAL | 1688 | 25.008 | -1.996 | 8.794  | 1.00 | 22.19 |
| ATOM | 1990 | CA  | VAL | 1688 | 25.372 | -1.024 | 9.831  | 1.00 | 21.99 |
| ATOM | 1991 | CB  | VAL | 1688 | 25.048 | 0.458  | 9.423  | 1.00 | 23.20 |
| ATOM | 1992 | CG1 | VAL | 1688 | 25.439 | 1.424  | 10.540 | 1.00 | 21.22 |
| ATOM | 1993 | CG2 | VAL | 1688 | 25.820 | 0.846  | 8.161  | 1.00 | 21.25 |
| ATOM | 1994 | C   | VAL | 1688 | 24.621 | -1.403 | 11.100 | 1.00 | 23.33 |
| ATOM | 1995 | O   | VAL | 1688 | 25.204 | -1.420 | 12.187 | 1.00 | 24.98 |
| ATOM | 1996 | N   | LEU | 1689 | 23.339 | -1.734 | 10.969 | 1.00 | 24.36 |
| ATOM | 1998 | CA  | LEU | 1689 | 22.542 | -2.161 | 12.122 | 1.00 | 23.92 |
| ATOM | 1999 | CB  | LEU | 1689 | 21.072 | -2.392 | 11.714 | 1.00 | 22.57 |
| ATOM | 2000 | CG  | LEU | 1689 | 19.981 | -2.427 | 12.805 | 1.00 | 23.41 |
| ATOM | 2001 | CD1 | LEU | 1689 | 18.614 | -2.295 | 12.164 | 1.00 | 19.14 |
| ATOM | 2002 | CD2 | LEU | 1689 | 20.048 | -3.700 | 13.658 | 1.00 | 22.75 |
| ATOM | 2003 | C   | LEU | 1689 | 23.158 | -3.447 | 12.717 | 1.00 | 25.22 |
| ATOM | 2004 | O   | LEU | 1689 | 23.202 | -3.592 | 13.937 | 1.00 | 25.58 |
| ATOM | 2005 | N   | LEU | 1690 | 23.614 | -4.379 | 11.871 | 1.00 | 25.47 |
| ATOM | 2007 | CA  | LEU | 1690 | 24.256 | -5.604 | 12.376 | 1.00 | 26.26 |
| ATOM | 2008 | CB  | LEU | 1690 | 24.730 | -6.531 | 11.255 | 1.00 | 26.22 |
| ATOM | 2009 | CG  | LEU | 1690 | 23.809 | -7.501 | 10.515 | 1.00 | 26.21 |
| ATOM | 2010 | CD1 | LEU | 1690 | 24.662 | -8.259 | 9.523  | 1.00 | 25.45 |
| ATOM | 2011 | CD2 | LEU | 1690 | 23.135 | -8.487 | 11.458 | 1.00 | 21.17 |
| ATOM | 2012 | C   | LEU | 1690 | 25.471 | -5.204 | 13.189 | 1.00 | 26.51 |
| ATOM | 2013 | O   | LEU | 1690 | 25.710 | -5.747 | 14.273 | 1.00 | 29.07 |
| ATOM | 2014 | N   | TRP | 1691 | 26.240 | -4.255 | 12.660 | 1.00 | 26.26 |
| ATOM | 2016 | CA  | TRP | 1691 | 27.431 | -3.761 | 13.341 | 1.00 | 25.08 |
| ATOM | 2017 | CB  | TRP | 1691 | 28.129 | -2.706 | 12.493 | 1.00 | 25.16 |
| ATOM | 2018 | CG  | TRP | 1691 | 29.456 | -2.268 | 13.039 | 1.00 | 27.49 |
| ATOM | 2019 | CD2 | TRP | 1691 | 29.701 | -1.163 | 13.925 | 1.00 | 25.81 |
| ATOM | 2020 | CE2 | TRP | 1691 | 31.100 | -1.070 | 14.103 | 1.00 | 22.63 |
| ATOM | 2021 | CE3 | TRP | 1691 | 28.870 | -0.236 | 14.575 | 1.00 | 26.70 |
| ATOM | 2022 | CD1 | TRP | 1691 | 30.688 | -2.798 | 12.735 | 1.00 | 23.03 |
| ATOM | 2023 | NE1 | TRP | 1691 | 31.675 | -2.078 | 13.371 | 1.00 | 25.19 |
| ATOM | 2025 | CZ2 | TRP | 1691 | 31.690 | -0.085 | 14.900 | 1.00 | 18.66 |
| ATOM | 2026 | CZ3 | TRP | 1691 | 29.459 | 0.745  | 15.371 | 1.00 | 25.66 |
| ATOM | 2027 | CH2 | TRP | 1691 | 30.861 | 0.812  | 15.523 | 1.00 | 23.00 |
| ATOM | 2028 | C   | TRP | 1691 | 27.114 | -3.195 | 14.727 | 1.00 | 24.63 |
| ATOM | 2029 | O   | TRP | 1691 | 27.871 | -3.393 | 15.662 | 1.00 | 27.79 |
| ATOM | 2030 | N   | GLU | 1692 | 25.985 | -2.506 | 14.862 | 1.00 | 26.48 |
| ATOM | 2032 | CA  | GLU | 1692 | 25.574 | -1.938 | 16.155 | 1.00 | 24.98 |



|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2033 | CB  | GLU | 1692 | 24.335 | -1.060  | 15.994 | 1.00 | 22.29 |
| ATOM | 2034 | CG  | GLU | 1692 | 24.507 | 0.107   | 15.056 | 1.00 | 18.31 |
| ATOM | 2035 | CD  | GLU | 1692 | 23.255 | 0.933   | 14.978 | 1.00 | 25.10 |
| ATOM | 2036 | OE1 | GLU | 1692 | 22.433 | 0.704   | 14.066 | 1.00 | 26.95 |
| ATOM | 2037 | OE2 | GLU | 1692 | 23.067 | 1.815   | 15.840 | 1.00 | 27.05 |
| ATOM | 2038 | C   | GLU | 1692 | 25.260 | -3.036  | 17.163 | 1.00 | 25.18 |
| ATOM | 2039 | O   | GLU | 1692 | 25.602 | -2.927  | 18.341 | 1.00 | 26.12 |
| ATOM | 2040 | N   | ILE | 1693 | 24.593 | -4.087  | 16.698 | 1.00 | 27.16 |
| ATOM | 2042 | CA  | ILE | 1693 | 24.231 | -5.214  | 17.555 | 1.00 | 25.91 |
| ATOM | 2043 | CB  | ILE | 1693 | 23.373 | -6.287  | 16.777 | 1.00 | 25.70 |
| ATOM | 2044 | CG2 | ILE | 1693 | 23.171 | -7.564  | 17.638 | 1.00 | 18.73 |
| ATOM | 2045 | CG1 | ILE | 1693 | 22.005 | -5.682  | 16.382 | 1.00 | 23.45 |
| ATOM | 2046 | CD1 | ILE | 1693 | 21.208 | -6.485  | 15.346 | 1.00 | 15.62 |
| ATOM | 2047 | C   | ILE | 1693 | 25.496 | -5.847  | 18.107 | 1.00 | 26.70 |
| ATOM | 2048 | O   | ILE | 1693 | 25.672 | -5.961  | 19.316 | 1.00 | 28.19 |
| ATOM | 2049 | N   | PHE | 1694 | 26.442 | -6.133  | 17.229 | 1.00 | 28.78 |
| ATOM | 2051 | CA  | PHE | 1694 | 27.664 | -6.779  | 17.679 | 1.00 | 29.72 |
| ATOM | 2052 | CB  | PHE | 1694 | 28.261 | -7.598  | 16.542 | 1.00 | 27.18 |
| ATOM | 2053 | CG  | PHE | 1694 | 27.315 | -8.649  | 16.048 | 1.00 | 25.38 |
| ATOM | 2054 | CD1 | PHE | 1694 | 26.793 | -8.599  | 14.770 | 1.00 | 26.16 |
| ATOM | 2055 | CD2 | PHE | 1694 | 26.844 | -9.625  | 16.919 | 1.00 | 26.37 |
| ATOM | 2056 | CE1 | PHE | 1694 | 25.806 | -9.505  | 14.370 | 1.00 | 31.37 |
| ATOM | 2057 | CE2 | PHE | 1694 | 25.863 | -10.533 | 16.536 | 1.00 | 25.23 |
| ATOM | 2058 | CZ  | PHE | 1694 | 25.337 | -10.478 | 15.268 | 1.00 | 29.46 |
| ATOM | 2059 | C   | PHE | 1694 | 28.663 | -5.906  | 18.438 | 1.00 | 30.92 |
| ATOM | 2060 | O   | PHE | 1694 | 29.697 | -6.403  | 18.902 | 1.00 | 32.23 |
| ATOM | 2061 | N   | THR | 1695 | 28.344 | -4.616  | 18.575 | 1.00 | 29.46 |
| ATOM | 2063 | CA  | THR | 1695 | 29.170 | -3.698  | 19.348 | 1.00 | 27.17 |
| ATOM | 2064 | CB  | THR | 1695 | 29.665 | -2.474  | 18.535 | 1.00 | 23.32 |
| ATOM | 2065 | OG1 | THR | 1695 | 28.553 | -1.710  | 18.046 | 1.00 | 24.73 |
| ATOM | 2067 | CG2 | THR | 1695 | 30.538 | -2.914  | 17.395 | 1.00 | 21.34 |
| ATOM | 2068 | C   | THR | 1695 | 28.307 | -3.230  | 20.519 | 1.00 | 28.81 |
| ATOM | 2069 | O   | THR | 1695 | 28.707 | -2.346  | 21.289 | 1.00 | 31.85 |
| ATOM | 2070 | N   | LEU | 1696 | 27.130 | -3.841  | 20.651 | 1.00 | 26.30 |
| ATOM | 2072 | CA  | LEU | 1696 | 26.188 | -3.523  | 21.720 | 1.00 | 25.99 |
| ATOM | 2073 | CB  | LEU | 1696 | 26.704 | -4.043  | 23.060 | 1.00 | 24.51 |
| ATOM | 2074 | CG  | LEU | 1696 | 26.974 | -5.539  | 23.194 | 1.00 | 23.32 |
| ATOM | 2075 | CD1 | LEU | 1696 | 27.447 | -5.843  | 24.597 | 1.00 | 26.45 |
| ATOM | 2076 | CD2 | LEU | 1696 | 25.726 | -6.297  | 22.907 | 1.00 | 29.79 |
| ATOM | 2077 | C   | LEU | 1696 | 25.892 | -2.036  | 21.837 | 1.00 | 24.90 |
| ATOM | 2078 | O   | LEU | 1696 | 26.083 | -1.457  | 22.889 | 1.00 | 28.99 |
| ATOM | 2079 | N   | GLY | 1697 | 25.386 | -1.432  | 20.771 | 1.00 | 25.05 |
| ATOM | 2081 | CA  | GLY | 1697 | 25.072 | -0.016  | 20.811 | 1.00 | 24.31 |
| ATOM | 2082 | C   | GLY | 1697 | 26.241 | 0.847   | 20.381 | 1.00 | 27.15 |
| ATOM | 2083 | O   | GLY | 1697 | 26.297 | 2.035   | 20.701 | 1.00 | 29.57 |
| ATOM | 2084 | N   | GLY | 1698 | 27.177 | 0.261   | 19.639 | 1.00 | 27.33 |
| ATOM | 2086 | CA  | GLY | 1698 | 28.319 | 1.023   | 19.178 | 1.00 | 27.04 |
| ATOM | 2087 | C   | GLY | 1698 | 27.966 | 2.109   | 18.173 | 1.00 | 29.78 |
| ATOM | 2088 | O   | GLY | 1698 | 27.115 | 1.929   | 17.301 | 1.00 | 32.03 |
| ATOM | 2089 | N   | SER | 1699 | 28.633 | 3.247   | 18.295 | 1.00 | 30.60 |
| ATOM | 2091 | CA  | SER | 1699 | 28.413 | 4.385   | 17.414 | 1.00 | 31.48 |
| ATOM | 2092 | CB  | SER | 1699 | 28.747 | 5.692   | 18.164 | 1.00 | 32.97 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 2093 | OG  | SER | 1699 | 28.350 | 6.848  | 17.436 | 1.00 | 37.75 |
| ATOM | 2095 | C   | SER | 1699 | 29.323 | 4.239  | 16.188 | 1.00 | 32.74 |
| ATOM | 2096 | O   | SER | 1699 | 30.541 | 4.034  | 16.321 | 1.00 | 33.04 |
| ATOM | 2097 | N   | PRO | 1700 | 28.732 | 4.276  | 14.979 | 1.00 | 31.40 |
| ATOM | 2098 | CD  | PRO | 1700 | 27.288 | 4.320  | 14.688 | 1.00 | 30.88 |
| ATOM | 2099 | CA  | PRO | 1700 | 29.507 | 4.153  | 13.737 | 1.00 | 30.55 |
| ATOM | 2100 | CB  | PRO | 1700 | 28.420 | 4.024  | 12.657 | 1.00 | 30.13 |
| ATOM | 2101 | CG  | PRO | 1700 | 27.228 | 3.535  | 13.398 | 1.00 | 31.10 |
| ATOM | 2102 | C   | PRO | 1700 | 30.300 | 5.427  | 13.509 | 1.00 | 31.19 |
| ATOM | 2103 | O   | PRO | 1700 | 29.766 | 6.522  | 13.651 | 1.00 | 35.48 |
| ATOM | 2104 | N   | TYR | 1701 | 31.574 | 5.277  | 13.175 | 1.00 | 29.51 |
| ATOM | 2106 | CA  | TYR | 1701 | 32.446 | 6.412  | 12.899 | 1.00 | 30.10 |
| ATOM | 2107 | CB  | TYR | 1701 | 32.084 | 7.029  | 11.541 | 1.00 | 32.84 |
| ATOM | 2108 | CG  | TYR | 1701 | 32.102 | 6.078  | 10.353 | 1.00 | 38.43 |
| ATOM | 2109 | CD1 | TYR | 1701 | 30.921 | 5.795  | 9.643  | 1.00 | 40.14 |
| ATOM | 2110 | CE1 | TYR | 1701 | 30.930 | 5.000  | 8.513  | 1.00 | 39.07 |
| ATOM | 2111 | CD2 | TYR | 1701 | 33.298 | 5.522  | 9.890  | 1.00 | 38.19 |
| ATOM | 2112 | CE2 | TYR | 1701 | 33.320 | 4.726  | 8.754  | 1.00 | 41.52 |
| ATOM | 2113 | CZ  | TYR | 1701 | 32.134 | 4.471  | 8.067  | 1.00 | 44.97 |
| ATOM | 2114 | OH  | TYR | 1701 | 32.151 | 3.700  | 6.919  | 1.00 | 54.77 |
| ATOM | 2116 | C   | TYR | 1701 | 32.426 | 7.524  | 13.965 | 1.00 | 30.38 |
| ATOM | 2117 | O   | TYR | 1701 | 32.009 | 8.655  | 13.685 | 1.00 | 30.54 |
| ATOM | 2118 | N   | PRO | 1702 | 32.947 | 7.239  | 15.170 | 1.00 | 30.61 |
| ATOM | 2119 | CD  | PRO | 1702 | 33.578 | 5.985  | 15.608 | 1.00 | 29.72 |
| ATOM | 2120 | CA  | PRO | 1702 | 32.971 | 8.239  | 16.248 | 1.00 | 28.48 |
| ATOM | 2121 | CB  | PRO | 1702 | 33.554 | 7.463  | 17.429 | 1.00 | 28.43 |
| ATOM | 2122 | CG  | PRO | 1702 | 33.320 | 6.025  | 17.085 | 1.00 | 30.63 |
| ATOM | 2123 | C   | PRO | 1702 | 33.897 | 9.385  | 15.981 | 1.00 | 26.93 |
| ATOM | 2124 | O   | PRO | 1702 | 34.998 | 9.156  | 15.418 | 1.00 | 26.21 |
| ATOM | 2125 | N   | GLY | 1703 | 33.440 | 10.613 | 16.084 | 1.00 | 29.51 |
| ATOM | 2127 | CA  | GLY | 1703 | 34.239 | 11.787 | 15.767 | 1.00 | 28.57 |
| ATOM | 2128 | C   | GLY | 1703 | 34.374 | 12.143 | 14.296 | 1.00 | 28.97 |
| ATOM | 2129 | O   | GLY | 1703 | 35.055 | 13.104 | 13.962 | 1.00 | 29.54 |
| ATOM | 2130 | N   | VAL | 1704 | 33.726 | 11.380 | 13.418 | 1.00 | 30.90 |
| ATOM | 2132 | CA  | VAL | 1704 | 33.798 | 11.616 | 11.975 | 1.00 | 29.48 |
| ATOM | 2133 | CB  | VAL | 1704 | 33.806 | 10.289 | 11.228 | 1.00 | 28.23 |
| ATOM | 2134 | CG1 | VAL | 1704 | 34.074 | 10.525 | 9.750  | 1.00 | 31.57 |
| ATOM | 2135 | CG2 | VAL | 1704 | 34.851 | 9.375  | 11.822 | 1.00 | 28.40 |
| ATOM | 2136 | C   | VAL | 1704 | 32.620 | 12.466 | 11.477 | 1.00 | 33.14 |
| ATOM | 2137 | O   | VAL | 1704 | 31.466 | 12.045 | 11.529 | 1.00 | 35.67 |
| ATOM | 2138 | N   | PRO | 1705 | 32.906 | 13.681 | 10.979 | 1.00 | 35.22 |
| ATOM | 2139 | CD  | PRO | 1705 | 34.217 | 14.348 | 11.008 | 1.00 | 38.03 |
| ATOM | 2140 | CA  | PRO | 1705 | 31.868 | 14.587 | 10.474 | 1.00 | 35.96 |
| ATOM | 2141 | CB  | PRO | 1705 | 32.534 | 15.953 | 10.627 | 1.00 | 35.84 |
| ATOM | 2142 | CG  | PRO | 1705 | 33.939 | 15.661 | 10.279 | 1.00 | 37.29 |
| ATOM | 2143 | C   | PRO | 1705 | 31.473 | 14.293 | 9.031  | 1.00 | 37.17 |
| ATOM | 2144 | O   | PRO | 1705 | 32.255 | 13.690 | 8.288  | 1.00 | 38.39 |
| ATOM | 2145 | N   | VAL | 1706 | 30.296 | 14.780 | 8.624  | 1.00 | 36.10 |
| ATOM | 2147 | CA  | VAL | 1706 | 29.743 | 14.582 | 7.276  | 1.00 | 37.10 |
| ATOM | 2148 | CB  | VAL | 1706 | 28.667 | 15.658 | 6.942  | 1.00 | 38.36 |
| ATOM | 2149 | CG1 | VAL | 1706 | 28.106 | 15.441 | 5.535  | 1.00 | 38.93 |
| ATOM | 2150 | CG2 | VAL | 1706 | 27.536 | 15.595 | 7.952  | 1.00 | 40.79 |

|      |      |     |     |      |        |        |       |      |       |
|------|------|-----|-----|------|--------|--------|-------|------|-------|
| ATOM | 2151 | C   | VAL | 1706 | 30.762 | 14.559 | 6.138 | 1.00 | 37.09 |
| ATOM | 2152 | O   | VAL | 1706 | 30.927 | 13.543 | 5.461 | 1.00 | 38.75 |
| ATOM | 2153 | N   | GLU | 1707 | 31.477 | 15.663 | 5.967 | 1.00 | 37.08 |
| ATOM | 2155 | CA  | GLU | 1707 | 32.472 | 15.793 | 4.910 | 1.00 | 35.52 |
| ATOM | 2156 | CB  | GLU | 1707 | 33.059 | 17.206 | 4.918 | 1.00 | 38.30 |
| ATOM | 2157 | C   | GLU | 1707 | 33.588 | 14.762 | 4.945 | 1.00 | 34.20 |
| ATOM | 2158 | O   | GLU | 1707 | 34.153 | 14.445 | 3.908 | 1.00 | 33.48 |
| ATOM | 2159 | N   | GLU | 1708 | 33.936 | 14.273 | 6.132 | 1.00 | 34.20 |
| ATOM | 2161 | CA  | GLU | 1708 | 34.981 | 13.256 | 6.241 | 1.00 | 36.08 |
| ATOM | 2162 | CB  | GLU | 1708 | 35.555 | 13.178 | 7.660 | 1.00 | 40.39 |
| ATOM | 2163 | CG  | GLU | 1708 | 36.212 | 14.464 | 8.179 | 1.00 | 45.41 |
| ATOM | 2164 | CD  | GLU | 1708 | 37.471 | 14.871 | 7.430 | 1.00 | 50.66 |
| ATOM | 2165 | OE1 | GLU | 1708 | 38.199 | 13.986 | 6.909 | 1.00 | 54.73 |
| ATOM | 2166 | OE2 | GLU | 1708 | 37.747 | 16.092 | 7.392 | 1.00 | 52.85 |
| ATOM | 2167 | C   | GLU | 1708 | 34.369 | 11.911 | 5.855 | 1.00 | 35.22 |
| ATOM | 2168 | O   | GLU | 1708 | 35.035 | 11.045 | 5.260 | 1.00 | 34.04 |
| ATOM | 2169 | N   | LEU | 1709 | 33.089 | 11.745 | 6.178 | 1.00 | 33.30 |
| ATOM | 2171 | CA  | LEU | 1709 | 32.376 | 10.519 | 5.860 | 1.00 | 31.44 |
| ATOM | 2172 | CB  | LEU | 1709 | 30.975 | 10.531 | 6.474 | 1.00 | 26.89 |
| ATOM | 2173 | CG  | LEU | 1709 | 30.065 | 9.365  | 6.073 | 1.00 | 26.05 |
| ATOM | 2174 | CD1 | LEU | 1709 | 30.652 | 8.036  | 6.503 | 1.00 | 22.75 |
| ATOM | 2175 | CD2 | LEU | 1709 | 28.717 | 9.574  | 6.597 | 1.00 | 26.15 |
| ATOM | 2176 | C   | LEU | 1709 | 32.291 | 10.325 | 4.350 | 1.00 | 31.18 |
| ATOM | 2177 | O   | LEU | 1709 | 32.490 | 9.209  | 3.856 | 1.00 | 29.88 |
| ATOM | 2178 | N   | PHE | 1710 | 32.011 | 11.408 | 3.623 | 1.00 | 30.16 |
| ATOM | 2180 | CA  | PHE | 1710 | 31.915 | 11.333 | 2.169 | 1.00 | 31.64 |
| ATOM | 2181 | CB  | PHE | 1710 | 31.658 | 12.710 | 1.567 | 1.00 | 33.44 |
| ATOM | 2182 | CG  | PHE | 1710 | 30.287 | 13.231 | 1.827 | 1.00 | 37.78 |
| ATOM | 2183 | CD1 | PHE | 1710 | 29.287 | 12.395 | 2.303 | 1.00 | 41.46 |
| ATOM | 2184 | CD2 | PHE | 1710 | 29.991 | 14.565 | 1.613 | 1.00 | 40.72 |
| ATOM | 2185 | CE1 | PHE | 1710 | 28.012 | 12.882 | 2.566 | 1.00 | 41.30 |
| ATOM | 2186 | CE2 | PHE | 1710 | 28.715 | 15.058 | 1.875 | 1.00 | 42.99 |
| ATOM | 2187 | CZ  | PHE | 1710 | 27.725 | 14.208 | 2.354 | 1.00 | 40.95 |
| ATOM | 2188 | C   | PHE | 1710 | 33.202 | 10.771 | 1.609 | 1.00 | 32.38 |
| ATOM | 2189 | O   | PHE | 1710 | 33.183 | 9.815  | 0.825 | 1.00 | 32.26 |
| ATOM | 2190 | N   | LYS | 1711 | 34.310 | 11.336 | 2.085 | 1.00 | 31.26 |
| ATOM | 2192 | CA  | LYS | 1711 | 35.664 | 10.971 | 1.697 | 1.00 | 29.73 |
| ATOM | 2193 | CB  | LYS | 1711 | 36.642 | 11.932 | 2.379 | 1.00 | 33.49 |
| ATOM | 2194 | CG  | LYS | 1711 | 38.103 | 11.716 | 2.042 | 1.00 | 39.79 |
| ATOM | 2195 | CD  | LYS | 1711 | 38.981 | 12.731 | 2.755 | 1.00 | 43.35 |
| ATOM | 2196 | CE  | LYS | 1711 | 40.413 | 12.686 | 2.238 | 1.00 | 46.23 |
| ATOM | 2197 | NZ  | LYS | 1711 | 41.116 | 11.422 | 2.600 | 1.00 | 53.67 |
| ATOM | 2201 | C   | LYS | 1711 | 35.999 | 9.501  | 2.015 | 1.00 | 29.34 |
| ATOM | 2202 | O   | LYS | 1711 | 36.670 | 8.836  | 1.231 | 1.00 | 28.77 |
| ATOM | 2203 | N   | LEU | 1712 | 35.541 | 9.000  | 3.164 | 1.00 | 30.40 |
| ATOM | 2205 | CA  | LEU | 1712 | 35.776 | 7.599  | 3.532 | 1.00 | 28.72 |
| ATOM | 2206 | CB  | LEU | 1712 | 35.241 | 7.295  | 4.942 | 1.00 | 27.71 |
| ATOM | 2207 | CG  | LEU | 1712 | 35.971 | 7.870  | 6.166 | 1.00 | 28.23 |
| ATOM | 2208 | CD1 | LEU | 1712 | 35.186 | 7.593  | 7.440 | 1.00 | 20.80 |
| ATOM | 2209 | CD2 | LEU | 1712 | 37.389 | 7.297  | 6.266 | 1.00 | 27.01 |
| ATOM | 2210 | C   | LEU | 1712 | 35.022 | 6.738  | 2.530 | 1.00 | 30.03 |
| ATOM | 2211 | O   | LEU | 1712 | 35.571 | 5.796  | 1.957 | 1.00 | 29.28 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 2212 | N   | LEU | 1713 | 33.752 | 7.073  | 2.325  | 1.00 | 31.98 |
| ATOM | 2214 | CA  | LEU | 1713 | 32.904 | 6.339  | 1.403  | 1.00 | 34.30 |
| ATOM | 2215 | CB  | LEU | 1713 | 31.467 | 6.872  | 1.447  | 1.00 | 37.65 |
| ATOM | 2216 | CG  | LEU | 1713 | 30.663 | 6.450  | 2.686  | 1.00 | 37.06 |
| ATOM | 2217 | CD1 | LEU | 1713 | 29.367 | 7.217  | 2.781  | 1.00 | 36.80 |
| ATOM | 2218 | CD2 | LEU | 1713 | 30.399 | 4.950  | 2.641  | 1.00 | 37.02 |
| ATOM | 2219 | C   | LEU | 1713 | 33.451 | 6.344  | -0.011 | 1.00 | 35.45 |
| ATOM | 2220 | O   | LEU | 1713 | 33.468 | 5.298  | -0.662 | 1.00 | 38.18 |
| ATOM | 2221 | N   | LYS | 1714 | 33.920 | 7.498  | -0.481 | 1.00 | 33.22 |
| ATOM | 2223 | CA  | LYS | 1714 | 34.487 | 7.590  | -1.821 | 1.00 | 31.46 |
| ATOM | 2224 | CB  | LYS | 1714 | 34.881 | 9.027  | -2.158 | 1.00 | 31.32 |
| ATOM | 2225 | CG  | LYS | 1714 | 33.724 | 9.962  | -2.399 | 1.00 | 33.49 |
| ATOM | 2226 | CD  | LYS | 1714 | 32.814 | 9.439  | -3.491 | 1.00 | 39.40 |
| ATOM | 2227 | CE  | LYS | 1714 | 31.613 | 10.364 | -3.720 | 1.00 | 44.79 |
| ATOM | 2228 | NZ  | LYS | 1714 | 30.674 | 9.841  | -4.771 | 1.00 | 50.41 |
| ATOM | 2232 | C   | LYS | 1714 | 35.706 | 6.678  | -1.953 | 1.00 | 32.53 |
| ATOM | 2233 | O   | LYS | 1714 | 35.998 | 6.155  | -3.025 | 1.00 | 35.46 |
| ATOM | 2234 | N   | GLU | 1715 | 36.420 | 6.488  | -0.856 | 1.00 | 33.50 |
| ATOM | 2236 | CA  | GLU | 1715 | 37.602 | 5.644  | -0.864 | 1.00 | 34.92 |
| ATOM | 2237 | CB  | GLU | 1715 | 38.617 | 5.177  | 0.143  | 1.00 | 37.20 |
| ATOM | 2238 | CG  | GLU | 1715 | 39.085 | 7.571  | -0.221 | 1.00 | 44.59 |
| ATOM | 2239 | CD  | GLU | 1715 | 39.654 | 8.372  | 0.946  | 1.00 | 51.44 |
| ATOM | 2240 | OE1 | GLU | 1715 | 39.820 | 7.826  | 2.065  | 1.00 | 51.40 |
| ATOM | 2241 | OE2 | GLU | 1715 | 39.930 | 9.573  | 0.726  | 1.00 | 54.23 |
| ATOM | 2242 | C   | GLU | 1715 | 37.278 | 4.183  | -0.581 | 1.00 | 35.09 |
| ATOM | 2243 | O   | GLU | 1715 | 38.184 | 3.357  | -0.482 | 1.00 | 37.59 |
| ATOM | 2244 | N   | GLY | 1716 | 35.991 | 3.866  | -0.455 | 1.00 | 33.79 |
| ATOM | 2246 | CA  | GLY | 1716 | 35.576 | 2.498  | -0.197 | 1.00 | 30.96 |
| ATOM | 2247 | C   | GLY | 1716 | 35.852 | 1.976  | 1.198  | 1.00 | 29.06 |
| ATOM | 2248 | O   | GLY | 1716 | 35.906 | 0.766  | 1.416  | 1.00 | 29.28 |
| ATOM | 2249 | N   | HIS | 1717 | 35.995 | 2.879  | 2.155  | 1.00 | 28.16 |
| ATOM | 2251 | CA  | HIS | 1717 | 36.282 | 2.489  | 3.532  | 1.00 | 29.80 |
| ATOM | 2252 | CB  | HIS | 1717 | 36.534 | 3.743  | 4.378  | 1.00 | 33.13 |
| ATOM | 2253 | CG  | HIS | 1717 | 36.794 | 3.469  | 5.826  | 1.00 | 36.22 |
| ATOM | 2254 | CD2 | HIS | 1717 | 37.955 | 3.375  | 6.516  | 1.00 | 35.38 |
| ATOM | 2255 | ND1 | HIS | 1717 | 35.782 | 3.279  | 6.746  | 1.00 | 37.81 |
| ATOM | 2257 | CE1 | HIS | 1717 | 36.309 | 3.080  | 7.942  | 1.00 | 36.97 |
| ATOM | 2258 | NE2 | HIS | 1717 | 37.624 | 3.134  | 7.830  | 1.00 | 35.83 |
| ATOM | 2260 | C   | HIS | 1717 | 35.171 | 1.645  | 4.153  | 1.00 | 29.26 |
| ATOM | 2261 | O   | HIS | 1717 | 33.987 | 1.900  | 3.940  | 1.00 | 31.43 |
| ATOM | 2262 | N   | ARG | 1718 | 35.571 | 0.666  | 4.955  | 1.00 | 28.11 |
| ATOM | 2264 | CA  | ARG | 1718 | 34.632 | -0.212 | 5.640  | 1.00 | 30.67 |
| ATOM | 2265 | CB  | ARG | 1718 | 34.592 | -1.583 | 4.973  | 1.00 | 27.32 |
| ATOM | 2266 | CG  | ARG | 1718 | 34.058 | -1.586 | 3.557  | 1.00 | 28.77 |
| ATOM | 2267 | CD  | ARG | 1718 | 32.609 | -1.111 | 3.484  | 1.00 | 28.84 |
| ATOM | 2268 | NE  | ARG | 1718 | 32.032 | -1.167 | 2.131  | 1.00 | 24.96 |
| ATOM | 2270 | CZ  | ARG | 1718 | 32.141 | -0.206 | 1.204  | 1.00 | 23.90 |
| ATOM | 2271 | NH1 | ARG | 1718 | 32.824 | 0.912  | 1.454  | 1.00 | 20.04 |
| ATOM | 2274 | NH2 | ARG | 1718 | 31.513 | -0.338 | 0.045  | 1.00 | 20.04 |
| ATOM | 2277 | C   | ARG | 1718 | 35.091 | -0.350 | 7.101  | 1.00 | 33.92 |
| ATOM | 2278 | O   | ARG | 1718 | 36.300 | -0.449 | 7.377  | 1.00 | 36.48 |
| ATOM | 2279 | N   | MET | 1719 | 34.134 | -0.355 | 8.028  | 1.00 | 33.22 |

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|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2281 | CA  | MET | 1719 | 34.428 | -0.459  | 9.448  | 1.00 | 32.33 |
| ATOM | 2282 | CB  | MET | 1719 | 33.148 | -0.285  | 10.277 | 1.00 | 34.72 |
| ATOM | 2283 | CG  | MET | 1719 | 32.454 | 1.066   | 10.076 | 1.00 | 35.04 |
| ATOM | 2284 | SD  | MET | 1719 | 31.025 | 1.447   | 11.141 | 1.00 | 34.06 |
| ATOM | 2285 | CE  | MET | 1719 | 29.757 | 0.470   | 10.409 | 1.00 | 33.14 |
| ATOM | 2286 | C   | MET | 1719 | 35.068 | -1.797  | 9.747  | 1.00 | 35.53 |
| ATOM | 2287 | O   | MET | 1719 | 34.896 | -2.756  | 8.991  | 1.00 | 35.48 |
| ATOM | 2288 | N   | ASP | 1720 | 35.826 | -1.843  | 10.840 | 1.00 | 38.65 |
| ATOM | 2290 | CA  | ASP | 1720 | 36.521 | -3.049  | 11.281 | 1.00 | 39.03 |
| ATOM | 2291 | CB  | ASP | 1720 | 37.659 | -2.678  | 12.237 | 1.00 | 43.11 |
| ATOM | 2292 | CG  | ASP | 1720 | 38.743 | -1.846  | 11.569 | 1.00 | 46.69 |
| ATOM | 2293 | OD1 | ASP | 1720 | 38.587 | -1.536  | 10.364 | 1.00 | 54.08 |
| ATOM | 2294 | OD2 | ASP | 1720 | 39.750 | -1.503  | 12.239 | 1.00 | 45.93 |
| ATOM | 2295 | C   | ASP | 1720 | 35.580 | -4.023  | 11.972 | 1.00 | 38.50 |
| ATOM | 2296 | O   | ASP | 1720 | 34.554 | -3.617  | 12.528 | 1.00 | 37.73 |
| ATOM | 2297 | N   | LYS | 1721 | 35.961 | -5.298  | 11.981 | 1.00 | 38.10 |
| ATOM | 2299 | CA  | LYS | 1721 | 35.151 | -6.339  | 12.600 | 1.00 | 38.12 |
| ATOM | 2300 | CB  | LYS | 1721 | 35.727 | -7.733  | 12.323 | 1.00 | 38.20 |
| ATOM | 2301 | CG  | LYS | 1721 | 34.825 | -8.858  | 12.825 | 1.00 | 38.48 |
| ATOM | 2302 | CD  | LYS | 1721 | 35.375 | -10.238 | 12.543 | 1.00 | 37.49 |
| ATOM | 2303 | CE  | LYS | 1721 | 36.320 | -10.691 | 13.625 | 1.00 | 39.11 |
| ATOM | 2304 | NZ  | LYS | 1721 | 36.448 | -12.167 | 13.628 | 1.00 | 40.75 |
| ATOM | 2308 | C   | LYS | 1721 | 35.092 | -6.142  | 14.091 | 1.00 | 40.24 |
| ATOM | 2309 | O   | LYS | 1721 | 36.136 | -6.032  | 14.739 | 1.00 | 42.70 |
| ATOM | 2310 | N   | PRO | 1722 | 33.875 | -6.082  | 14.658 | 1.00 | 41.23 |
| ATOM | 2311 | CD  | PRO | 1722 | 32.547 | -6.153  | 14.019 | 1.00 | 38.63 |
| ATOM | 2312 | CA  | PRO | 1722 | 33.743 | -5.901  | 16.104 | 1.00 | 41.71 |
| ATOM | 2313 | CB  | PRO | 1722 | 32.223 | -5.957  | 16.306 | 1.00 | 38.90 |
| ATOM | 2314 | CG  | PRO | 1722 | 31.679 | -5.442  | 15.016 | 1.00 | 34.19 |
| ATOM | 2315 | C   | PRO | 1722 | 34.418 | -7.079  | 16.819 | 1.00 | 43.96 |
| ATOM | 2316 | O   | PRO | 1722 | 34.542 | -8.174  | 16.250 | 1.00 | 43.02 |
| ATOM | 2317 | N   | SER | 1723 | 34.915 | -6.860  | 18.028 | 1.00 | 46.76 |
| ATOM | 2319 | CA  | SER | 1723 | 35.493 | -7.973  | 18.747 | 1.00 | 50.74 |
| ATOM | 2320 | CB  | SER | 1723 | 36.265 | -7.500  | 19.980 | 1.00 | 49.47 |
| ATOM | 2321 | OG  | SER | 1723 | 35.400 | -7.130  | 21.035 | 1.00 | 53.87 |
| ATOM | 2323 | C   | SER | 1723 | 34.259 | -8.782  | 19.143 | 1.00 | 53.24 |
| ATOM | 2324 | O   | SER | 1723 | 33.136 | -8.259  | 19.130 | 1.00 | 53.97 |
| ATOM | 2325 | N   | ASN | 1724 | 34.443 | -10.064 | 19.426 | 1.00 | 56.59 |
| ATOM | 2327 | CA  | ASN | 1724 | 33.316 | -10.899 | 19.825 | 1.00 | 59.55 |
| ATOM | 2328 | CB  | ASN | 1724 | 32.739 | -10.386 | 21.162 | 1.00 | 66.12 |
| ATOM | 2329 | CG  | ASN | 1724 | 33.824 | -10.128 | 22.213 | 1.00 | 71.34 |
| ATOM | 2330 | OD1 | ASN | 1724 | 34.661 | -10.990 | 22.485 | 1.00 | 73.38 |
| ATOM | 2331 | ND2 | ASN | 1724 | 33.831 | -8.926  | 22.779 | 1.00 | 74.19 |
| ATOM | 2334 | C   | ASN | 1724 | 32.256 | -10.900 | 18.711 | 1.00 | 57.31 |
| ATOM | 2335 | O   | ASN | 1724 | 31.073 | -10.662 | 18.940 | 1.00 | 59.27 |
| ATOM | 2336 | N   | CYS | 1725 | 32.723 | -11.132 | 17.493 | 1.00 | 54.50 |
| ATOM | 2338 | CA  | CYS | 1725 | 31.881 | -11.203 | 16.300 | 1.00 | 50.89 |
| ATOM | 2339 | CB  | CYS | 1725 | 31.827 | -9.848  | 15.576 | 1.00 | 50.09 |
| ATOM | 2340 | SG  | CYS | 1725 | 30.893 | -9.833  | 14.006 | 1.00 | 44.81 |
| ATOM | 2341 | C   | CYS | 1725 | 32.596 | -12.235 | 15.439 | 1.00 | 47.28 |
| ATOM | 2342 | O   | CYS | 1725 | 33.820 | -12.172 | 15.288 | 1.00 | 48.97 |
| ATOM | 2343 | N   | THR | 1726 | 31.863 | -13.229 | 14.950 | 1.00 | 42.60 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2345 | CA  | THR | 1726 | 32.472 | -14.275 | 14.139 | 1.00 | 39.22 |
| ATOM | 2346 | CB  | THR | 1726 | 31.520 | -15.494 | 13.984 | 1.00 | 36.36 |
| ATOM | 2347 | OG1 | THR | 1726 | 30.290 | -15.087 | 13.363 | 1.00 | 36.62 |
| ATOM | 2349 | CG2 | THR | 1726 | 31.210 | -16.084 | 15.326 | 1.00 | 33.12 |
| ATOM | 2350 | C   | THR | 1726 | 32.858 | -13.748 | 12.776 | 1.00 | 37.99 |
| ATOM | 2351 | O   | THR | 1726 | 32.373 | -12.704 | 12.357 | 1.00 | 39.57 |
| ATOM | 2352 | N   | ASN | 1727 | 33.724 | -14.473 | 12.080 | 1.00 | 37.02 |
| ATOM | 2354 | CA  | ASN | 1727 | 34.133 | -14.044 | 10.742 | 1.00 | 38.17 |
| ATOM | 2355 | CB  | ASN | 1727 | 35.290 | -14.880 | 10.221 | 1.00 | 40.63 |
| ATOM | 2356 | CG  | ASN | 1727 | 36.580 | -14.593 | 10.953 | 1.00 | 44.79 |
| ATOM | 2357 | OD1 | ASN | 1727 | 37.188 | -13.539 | 10.781 | 1.00 | 46.57 |
| ATOM | 2358 | ND2 | ASN | 1727 | 37.010 | -15.536 | 11.778 | 1.00 | 48.30 |
| ATOM | 2361 | C   | ASN | 1727 | 32.958 | -14.159 | 9.786  | 1.00 | 38.22 |
| ATOM | 2362 | O   | ASN | 1727 | 32.883 | -13.431 | 8.793  | 1.00 | 39.53 |
| ATOM | 2363 | N   | GLU | 1728 | 32.041 | -15.076 | 10.093 | 1.00 | 37.33 |
| ATOM | 2365 | CA  | GLU | 1728 | 30.854 | -15.312 | 9.273  | 1.00 | 34.24 |
| ATOM | 2366 | CB  | GLU | 1728 | 30.109 | -16.551 | 9.765  | 1.00 | 32.82 |
| ATOM | 2367 | CG  | GLU | 1728 | 28.973 | -17.000 | 8.855  | 1.00 | 35.84 |
| ATOM | 2368 | CD  | GLU | 1728 | 28.329 | -18.306 | 9.297  | 1.00 | 42.16 |
| ATOM | 2369 | OE1 | GLU | 1728 | 28.409 | -18.633 | 10.504 | 1.00 | 46.78 |
| ATOM | 2370 | OE2 | GLU | 1728 | 27.734 | -18.996 | 8.440  | 1.00 | 38.81 |
| ATOM | 2371 | C   | GLU | 1728 | 29.925 | -14.104 | 9.313  | 1.00 | 33.05 |
| ATOM | 2372 | O   | GLU | 1728 | 29.521 | -13.574 | 8.272  | 1.00 | 29.58 |
| ATOM | 2373 | N   | LEU | 1729 | 29.608 | -13.671 | 10.527 | 1.00 | 32.09 |
| ATOM | 2375 | CA  | LEU | 1729 | 28.741 | -12.530 | 10.710 | 1.00 | 32.45 |
| ATOM | 2376 | CB  | LEU | 1729 | 28.351 | -12.389 | 12.170 | 1.00 | 32.64 |
| ATOM | 2377 | CG  | LEU | 1729 | 27.311 | -13.431 | 12.575 | 1.00 | 34.65 |
| ATOM | 2378 | CD1 | LEU | 1729 | 27.131 | -13.388 | 14.089 | 1.00 | 37.18 |
| ATOM | 2379 | CD2 | LEU | 1729 | 25.988 | -13.167 | 11.842 | 1.00 | 27.77 |
| ATOM | 2380 | C   | LEU | 1729 | 29.359 | -11.252 | 10.175 | 1.00 | 32.68 |
| ATOM | 2381 | O   | LEU | 1729 | 28.638 | -10.367 | 9.693  | 1.00 | 31.97 |
| ATOM | 2382 | N   | TYR | 1730 | 30.688 | -11.143 | 10.251 | 1.00 | 31.70 |
| ATOM | 2384 | CA  | TYR | 1730 | 31.378 | -9.959  | 9.734  | 1.00 | 30.19 |
| ATOM | 2385 | CB  | TYR | 1730 | 32.849 | -9.940  | 10.154 | 1.00 | 27.88 |
| ATOM | 2386 | CG  | TYR | 1730 | 33.591 | -8.723  | 9.649  | 1.00 | 26.63 |
| ATOM | 2387 | CD1 | TYR | 1730 | 33.093 | -7.449  | 9.879  | 1.00 | 27.37 |
| ATOM | 2388 | CE1 | TYR | 1730 | 33.725 | -6.324  | 9.378  | 1.00 | 27.56 |
| ATOM | 2389 | CD2 | TYR | 1730 | 34.759 | -8.849  | 8.904  | 1.00 | 24.07 |
| ATOM | 2390 | CE2 | TYR | 1730 | 35.408 | -7.724  | 8.393  | 1.00 | 24.81 |
| ATOM | 2391 | CZ  | TYR | 1730 | 34.882 | -6.462  | 8.631  | 1.00 | 28.56 |
| ATOM | 2392 | OH  | TYR | 1730 | 35.473 | -5.316  | 8.111  | 1.00 | 29.08 |
| ATOM | 2394 | C   | TYR | 1730 | 31.287 | -9.962  | 8.208  | 1.00 | 29.50 |
| ATOM | 2395 | O   | TYR | 1730 | 31.062 | -8.928  | 7.585  | 1.00 | 29.16 |
| ATOM | 2396 | N   | MET | 1731 | 31.443 | -11.139 | 7.623  | 1.00 | 31.05 |
| ATOM | 2398 | CA  | MET | 1731 | 31.366 | -11.313 | 6.187  | 1.00 | 34.59 |
| ATOM | 2399 | CB  | MET | 1731 | 31.611 | -12.779 | 5.840  | 1.00 | 41.42 |
| ATOM | 2400 | CG  | MET | 1731 | 31.315 | -13.149 | 4.403  | 1.00 | 52.20 |
| ATOM | 2401 | SD  | MET | 1731 | 31.801 | -14.840 | 3.994  | 1.00 | 64.38 |
| ATOM | 2402 | CE  | MET | 1731 | 32.926 | -14.502 | 2.606  | 1.00 | 63.03 |
| ATOM | 2403 | C   | MET | 1731 | 29.992 | -10.869 | 5.695  | 1.00 | 34.53 |
| ATOM | 2404 | O   | MET | 1731 | 29.863 | -10.268 | 4.619  | 1.00 | 35.08 |
| ATOM | 2405 | N   | MET | 1732 | 28.971 | -11.153 | 6.501  | 1.00 | 33.32 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2407 | CA  | MET | 1732 | 27.594 | -10.770 | 6.194  | 1.00 | 31.78 |
| ATOM | 2408 | CB  | MET | 1732 | 26.634 | -11.346 | 7.236  | 1.00 | 30.42 |
| ATOM | 2409 | CG  | MET | 1732 | 25.172 | -11.071 | 6.938  | 1.00 | 30.28 |
| ATOM | 2410 | SD  | MET | 1732 | 24.071 | -11.709 | 8.183  | 1.00 | 27.41 |
| ATOM | 2411 | CE  | MET | 1732 | 23.738 | -13.369 | 7.471  | 1.00 | 22.35 |
| ATOM | 2412 | C   | MET | 1732 | 27.484 | -9.243  | 6.158  | 1.00 | 31.10 |
| ATOM | 2413 | O   | MET | 1732 | 26.794 | -8.680  | 5.303  | 1.00 | 31.08 |
| ATOM | 2414 | N   | MET | 1733 | 28.139 | -8.586  | 7.114  | 1.00 | 31.22 |
| ATOM | 2416 | CA  | MET | 1733 | 28.161 | -7.128  | 7.189  | 1.00 | 30.93 |
| ATOM | 2417 | CB  | MET | 1733 | 29.001 | -6.665  | 8.376  | 1.00 | 31.91 |
| ATOM | 2418 | CG  | MET | 1733 | 28.368 | -6.906  | 9.710  | 1.00 | 33.63 |
| ATOM | 2419 | SD  | MET | 1733 | 29.375 | -6.210  | 11.021 | 1.00 | 34.53 |
| ATOM | 2420 | CE  | MET | 1733 | 29.106 | -7.395  | 12.280 | 1.00 | 34.12 |
| ATOM | 2421 | C   | MET | 1733 | 28.830 | -6.623  | 5.921  | 1.00 | 32.49 |
| ATOM | 2422 | O   | MET | 1733 | 28.357 | -5.682  | 5.281  | 1.00 | 33.61 |
| ATOM | 2423 | N   | ARG | 1734 | 29.932 | -7.269  | 5.551  | 1.00 | 32.11 |
| ATOM | 2425 | CA  | ARG | 1734 | 30.673 | -6.889  | 4.355  | 1.00 | 31.13 |
| ATOM | 2426 | CB  | ARG | 1734 | 32.012 | -7.623  | 4.308  | 1.00 | 28.68 |
| ATOM | 2427 | CG  | ARG | 1734 | 32.953 | -7.267  | 5.451  | 1.00 | 27.19 |
| ATOM | 2428 | CD  | ARG | 1734 | 33.159 | -5.766  | 5.558  | 1.00 | 26.80 |
| ATOM | 2429 | NE  | ARG | 1734 | 33.864 | -5.243  | 4.393  | 1.00 | 35.67 |
| ATOM | 2431 | CZ  | ARG | 1734 | 35.187 | -5.305  | 4.223  | 1.00 | 38.03 |
| ATOM | 2432 | NH1 | ARG | 1734 | 35.967 | -5.861  | 5.148  | 1.00 | 38.07 |
| ATOM | 2435 | NH2 | ARG | 1734 | 35.729 | -4.850  | 3.094  | 1.00 | 38.87 |
| ATOM | 2438 | C   | ARG | 1734 | 29.873 | -7.098  | 3.065  | 1.00 | 29.53 |
| ATOM | 2439 | O   | ARG | 1734 | 30.029 | -6.334  | 2.121  | 1.00 | 29.11 |
| ATOM | 2440 | N   | ASP | 1735 | 29.036 | -8.137  | 3.025  | 1.00 | 29.48 |
| ATOM | 2442 | CA  | ASP | 1735 | 28.193 | -8.412  | 1.859  | 1.00 | 26.82 |
| ATOM | 2443 | CB  | ASP | 1735 | 27.591 | -9.811  | 1.933  | 1.00 | 30.25 |
| ATOM | 2444 | CG  | ASP | 1735 | 28.632 | -10.895 | 1.773  | 1.00 | 35.13 |
| ATOM | 2445 | OD1 | ASP | 1735 | 29.626 | -10.645 | 1.052  | 1.00 | 35.19 |
| ATOM | 2446 | OD2 | ASP | 1735 | 28.458 | -11.990 | 2.366  | 1.00 | 39.35 |
| ATOM | 2447 | C   | ASP | 1735 | 27.082 | -7.375  | 1.760  | 1.00 | 23.88 |
| ATOM | 2448 | O   | ASP | 1735 | 26.692 | -6.992  | 0.656  | 1.00 | 24.83 |
| ATOM | 2449 | N   | CYS | 1736 | 26.574 | -6.929  | 2.913  | 1.00 | 22.13 |
| ATOM | 2451 | CA  | CYS | 1736 | 25.538 | -5.887  | 2.965  | 1.00 | 21.74 |
| ATOM | 2452 | CB  | CYS | 1736 | 25.005 | -5.692  | 4.401  | 1.00 | 20.46 |
| ATOM | 2453 | SG  | CYS | 1736 | 23.978 | -7.013  | 5.053  | 1.00 | 19.59 |
| ATOM | 2454 | C   | CYS | 1736 | 26.104 | -4.542  | 2.456  | 1.00 | 20.51 |
| ATOM | 2455 | O   | CYS | 1736 | 25.377 | -3.732  | 1.887  | 1.00 | 16.07 |
| ATOM | 2456 | N   | TRP | 1737 | 27.401 | -4.325  | 2.670  | 1.00 | 21.58 |
| ATOM | 2458 | CA  | TRP | 1737 | 28.080 | -3.113  | 2.248  | 1.00 | 20.57 |
| ATOM | 2459 | CB  | TRP | 1737 | 29.107 | -2.682  | 3.291  | 1.00 | 17.02 |
| ATOM | 2460 | CG  | TRP | 1737 | 28.558 | -2.415  | 4.654  | 1.00 | 20.35 |
| ATOM | 2461 | CD2 | TRP | 1737 | 29.254 | -2.564  | 5.897  | 1.00 | 20.42 |
| ATOM | 2462 | CE2 | TRP | 1737 | 28.387 | -2.122  | 6.923  | 1.00 | 21.18 |
| ATOM | 2463 | CE3 | TRP | 1737 | 30.538 | -3.027  | 6.243  | 1.00 | 21.60 |
| ATOM | 2464 | CD1 | TRP | 1737 | 27.317 | -1.914  | 4.970  | 1.00 | 19.86 |
| ATOM | 2465 | NE1 | TRP | 1737 | 27.210 | -1.732  | 6.328  | 1.00 | 21.03 |
| ATOM | 2467 | CZ2 | TRP | 1737 | 28.760 | -2.125  | 8.276  | 1.00 | 21.70 |
| ATOM | 2468 | CZ3 | TRP | 1737 | 30.910 | -3.031  | 7.594  | 1.00 | 21.73 |
| ATOM | 2469 | CH2 | TRP | 1737 | 30.025 | -2.584  | 8.588  | 1.00 | 23.06 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2470 | C   | TRP | 1737 | 28.770 | -3.281  | 0.899  | 1.00 | 24.98 |
| ATOM | 2471 | O   | TRP | 1737 | 29.758 | -2.607  | 0.610  | 1.00 | 25.84 |
| ATOM | 2472 | N   | HIS | 1738 | 28.269 | -4.185  | 0.063  | 1.00 | 27.61 |
| ATOM | 2474 | CA  | HIS | 1738 | 28.885 | -4.352  | -1.243 | 1.00 | 25.81 |
| ATOM | 2475 | CB  | HIS | 1738 | 28.263 | -5.522  | -2.013 | 1.00 | 24.74 |
| ATOM | 2476 | CG  | HIS | 1738 | 29.105 | -6.005  | -3.162 | 1.00 | 26.07 |
| ATOM | 2477 | CD2 | HIS | 1738 | 29.599 | -5.353  | -4.246 | 1.00 | 25.45 |
| ATOM | 2478 | ND1 | HIS | 1738 | 29.571 | -7.299  | -3.252 | 1.00 | 24.60 |
| ATOM | 2480 | CE1 | HIS | 1738 | 30.320 | -7.422  | -4.333 | 1.00 | 24.62 |
| ATOM | 2481 | NE2 | HIS | 1738 | 30.352 | -6.253  | -4.954 | 1.00 | 23.97 |
| ATOM | 2483 | C   | HIS | 1738 | 28.734 | -3.034  | -2.017 | 1.00 | 26.41 |
| ATOM | 2484 | O   | HIS | 1738 | 27.705 | -2.350  | -1.931 | 1.00 | 25.20 |
| ATOM | 2485 | N   | ALA | 1739 | 29.792 | -2.658  | -2.727 | 1.00 | 26.45 |
| ATOM | 2487 | CA  | ALA | 1739 | 29.829 | -1.437  | -3.517 | 1.00 | 25.61 |
| ATOM | 2488 | CB  | ALA | 1739 | 31.193 | -1.285  | -4.117 | 1.00 | 25.87 |
| ATOM | 2489 | C   | ALA | 1739 | 28.765 | -1.418  | -4.617 | 1.00 | 26.67 |
| ATOM | 2490 | O   | ALA | 1739 | 28.207 | -0.367  | -4.930 | 1.00 | 28.28 |
| ATOM | 2491 | N   | VAL | 1740 | 28.529 | -2.573  | -5.235 | 1.00 | 25.10 |
| ATOM | 2493 | CA  | VAL | 1740 | 27.526 | -2.706  | -6.292 | 1.00 | 24.14 |
| ATOM | 2494 | CB  | VAL | 1740 | 27.969 | -3.737  | -7.378 | 1.00 | 24.27 |
| ATOM | 2495 | CG1 | VAL | 1740 | 26.979 | -3.792  | -8.503 | 1.00 | 20.03 |
| ATOM | 2496 | CG2 | VAL | 1740 | 29.331 | -3.375  | -7.926 | 1.00 | 26.74 |
| ATOM | 2497 | C   | VAL | 1740 | 26.234 | -3.196  | -5.639 | 1.00 | 23.91 |
| ATOM | 2498 | O   | VAL | 1740 | 26.173 | -4.349  | -5.175 | 1.00 | 26.37 |
| ATOM | 2499 | N   | PRO | 1741 | 25.173 | -2.357  | -5.653 | 1.00 | 24.55 |
| ATOM | 2500 | CD  | PRO | 1741 | 25.096 | -1.065  | -6.369 | 1.00 | 17.73 |
| ATOM | 2501 | CA  | PRO | 1741 | 23.868 | -2.686  | -5.058 | 1.00 | 22.27 |
| ATOM | 2502 | CB  | PRO | 1741 | 22.979 | -1.536  | -5.545 | 1.00 | 17.82 |
| ATOM | 2503 | CG  | PRO | 1741 | 23.925 | -0.410  | -5.710 | 1.00 | 13.27 |
| ATOM | 2504 | C   | PRO | 1741 | 23.275 | -4.057  | -5.418 | 1.00 | 24.04 |
| ATOM | 2505 | O   | PRO | 1741 | 22.735 | -4.748  | -4.548 | 1.00 | 25.86 |
| ATOM | 2506 | N   | SER | 1742 | 23.431 | -4.471  | -6.674 | 1.00 | 24.30 |
| ATOM | 2508 | CA  | SER | 1742 | 22.888 | -5.745  | -7.167 | 1.00 | 24.42 |
| ATOM | 2509 | CB  | SER | 1742 | 22.986 | -5.819  | -8.696 | 1.00 | 23.95 |
| ATOM | 2510 | OG  | SER | 1742 | 24.334 | -5.784  | -9.131 | 1.00 | 22.98 |
| ATOM | 2512 | C   | SER | 1742 | 23.553 | -6.978  | -6.589 | 1.00 | 25.20 |
| ATOM | 2513 | O   | SER | 1742 | 22.994 | -8.085  | -6.677 | 1.00 | 23.68 |
| ATOM | 2514 | N   | GLN | 1743 | 24.753 | -6.793  | -6.037 | 1.00 | 25.46 |
| ATOM | 2516 | CA  | GLN | 1743 | 25.504 | -7.910  | -5.485 | 1.00 | 25.64 |
| ATOM | 2517 | CB  | GLN | 1743 | 26.993 | -7.773  | -5.807 | 1.00 | 24.02 |
| ATOM | 2518 | CG  | GLN | 1743 | 27.263 | -7.768  | -7.295 | 1.00 | 22.75 |
| ATOM | 2519 | CD  | GLN | 1743 | 26.585 | -8.938  | -8.014 | 1.00 | 26.21 |
| ATOM | 2520 | OE1 | GLN | 1743 | 26.999 | -10.087 | -7.864 | 1.00 | 28.67 |
| ATOM | 2521 | NE2 | GLN | 1743 | 25.535 | -8.649  | -8.787 | 1.00 | 21.57 |
| ATOM | 2524 | C   | GLN | 1743 | 25.270 | -8.148  | -4.007 | 1.00 | 24.86 |
| ATOM | 2525 | O   | GLN | 1743 | 25.685 | -9.173  | -3.456 | 1.00 | 25.24 |
| ATOM | 2526 | N   | ARG | 1744 | 24.525 | -7.244  | -3.389 | 1.00 | 23.38 |
| ATOM | 2528 | CA  | ARG | 1744 | 24.230 | -7.376  | -1.976 | 1.00 | 22.41 |
| ATOM | 2529 | CB  | ARG | 1744 | 23.727 | -6.055  | -1.415 | 1.00 | 22.24 |
| ATOM | 2530 | CG  | ARG | 1744 | 24.718 | -4.909  | -1.523 | 1.00 | 22.53 |
| ATOM | 2531 | CD  | ARG | 1744 | 24.084 | -3.577  | -1.134 | 1.00 | 19.82 |
| ATOM | 2532 | NE  | ARG | 1744 | 24.963 | -2.475  | -1.517 | 1.00 | 22.51 |



|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2534 | CZ  | ARG | 1744 | 24.592 | -1.201  | -1.663 | 1.00 | 22.92 |
| ATOM | 2535 | NH1 | ARG | 1744 | 23.332 | -0.814  | -1.458 | 1.00 | 18.28 |
| ATOM | 2538 | NH2 | ARG | 1744 | 25.491 | -0.310  | -2.060 | 1.00 | 22.15 |
| ATOM | 2541 | C   | ARG | 1744 | 23.163 | -8.458  | -1.833 | 1.00 | 24.61 |
| ATOM | 2542 | O   | ARG | 1744 | 22.428 | -8.755  | -2.786 | 1.00 | 26.94 |
| ATOM | 2543 | N   | PRO | 1745 | 23.143 | -9.155  | -0.688 | 1.00 | 23.21 |
| ATOM | 2544 | CD  | PRO | 1745 | 24.052 | -9.107  | 0.470  | 1.00 | 22.38 |
| ATOM | 2545 | CA  | PRO | 1745 | 22.129 | -10.190 | -0.522 | 1.00 | 22.24 |
| ATOM | 2546 | CB  | PRO | 1745 | 22.623 | -10.942 | 0.711  | 1.00 | 21.13 |
| ATOM | 2547 | CG  | PRO | 1745 | 23.286 | -9.864  | 1.504  | 1.00 | 20.24 |
| ATOM | 2548 | C   | PRO | 1745 | 20.800 | -9.506  | -0.256 | 1.00 | 23.11 |
| ATOM | 2549 | O   | PRO | 1745 | 20.743 | -8.300  | 0.020  | 1.00 | 25.93 |
| ATOM | 2550 | N   | THR | 1746 | 19.724 | -10.256 | -0.373 | 1.00 | 20.82 |
| ATOM | 2552 | CA  | THR | 1746 | 18.420 | -9.697  | -0.112 | 1.00 | 20.47 |
| ATOM | 2553 | CB  | THR | 1746 | 17.386 | -10.342 | -1.041 | 1.00 | 18.61 |
| ATOM | 2554 | OG1 | THR | 1746 | 17.382 | -11.755 | -0.822 | 1.00 | 21.86 |
| ATOM | 2556 | CG2 | THR | 1746 | 17.746 | -10.078 | -2.487 | 1.00 | 21.13 |
| ATOM | 2557 | C   | THR | 1746 | 18.060 | -9.970  | 1.344  | 1.00 | 20.84 |
| ATOM | 2558 | O   | THR | 1746 | 18.787 | -10.674 | 2.055  | 1.00 | 22.08 |
| ATOM | 2559 | N   | PHE | 1747 | 16.953 | -9.406  | 1.810  | 1.00 | 21.58 |
| ATOM | 2561 | CA  | PHE | 1747 | 16.536 | -9.675  | 3.178  | 1.00 | 21.15 |
| ATOM | 2562 | CB  | PHE | 1747 | 15.442 | -8.710  | 3.613  | 1.00 | 20.34 |
| ATOM | 2563 | CG  | PHE | 1747 | 15.961 | -7.350  | 3.982  | 1.00 | 23.18 |
| ATOM | 2564 | CD1 | PHE | 1747 | 16.729 | -7.170  | 5.130  | 1.00 | 22.26 |
| ATOM | 2565 | CD2 | PHE | 1747 | 15.668 | -6.240  | 3.196  | 1.00 | 23.41 |
| ATOM | 2566 | CE1 | PHE | 1747 | 17.186 | -5.909  | 5.484  | 1.00 | 17.31 |
| ATOM | 2567 | CE2 | PHE | 1747 | 16.124 | -4.967  | 3.548  | 1.00 | 17.93 |
| ATOM | 2568 | CZ  | PHE | 1747 | 16.883 | -4.809  | 4.696  | 1.00 | 19.06 |
| ATOM | 2569 | C   | PHE | 1747 | 16.062 | -11.124 | 3.217  | 1.00 | 21.61 |
| ATOM | 2570 | O   | PHE | 1747 | 16.248 | -11.823 | 4.212  | 1.00 | 22.19 |
| ATOM | 2571 | N   | LYS | 1748 | 15.490 | -11.588 | 2.111  | 1.00 | 22.00 |
| ATOM | 2573 | CA  | LYS | 1748 | 15.048 | -12.973 | 2.009  | 1.00 | 24.34 |
| ATOM | 2574 | CB  | LYS | 1748 | 14.471 | -13.227 | 0.621  | 1.00 | 23.61 |
| ATOM | 2575 | CG  | LYS | 1748 | 14.050 | -14.663 | 0.416  | 1.00 | 27.45 |
| ATOM | 2576 | CD  | LYS | 1748 | 13.633 | -14.932 | -0.998 | 1.00 | 28.97 |
| ATOM | 2577 | CE  | LYS | 1748 | 13.244 | -16.394 | -1.163 | 1.00 | 35.95 |
| ATOM | 2578 | NZ  | LYS | 1748 | 12.213 | -16.795 | -0.153 | 1.00 | 41.69 |
| ATOM | 2582 | C   | LYS | 1748 | 16.257 | -13.907 | 2.264  | 1.00 | 27.58 |
| ATOM | 2583 | O   | LYS | 1748 | 16.161 | -14.863 | 3.034  | 1.00 | 29.73 |
| ATOM | 2584 | N   | GLN | 1749 | 17.397 | -13.604 | 1.640  | 1.00 | 25.88 |
| ATOM | 2586 | CA  | GLN | 1749 | 18.617 | -14.394 | 1.804  | 1.00 | 23.72 |
| ATOM | 2587 | CB  | GLN | 1749 | 19.692 | -13.925 | 0.837  | 1.00 | 27.00 |
| ATOM | 2588 | CG  | GLN | 1749 | 19.338 | -13.954 | -0.628 | 1.00 | 32.28 |
| ATOM | 2589 | CD  | GLN | 1749 | 20.442 | -13.331 | -1.477 | 1.00 | 36.35 |
| ATOM | 2590 | OE1 | GLN | 1749 | 20.175 | -12.528 | -2.368 | 1.00 | 37.63 |
| ATOM | 2591 | NE2 | GLN | 1749 | 21.699 | -13.702 | -1.194 | 1.00 | 38.60 |
| ATOM | 2594 | C   | GLN | 1749 | 19.177 | -14.266 | 3.212  | 1.00 | 23.44 |
| ATOM | 2595 | O   | GLN | 1749 | 19.586 | -15.260 | 3.826  | 1.00 | 23.52 |
| ATOM | 2596 | N   | LEU | 1750 | 19.267 | -13.035 | 3.703  | 1.00 | 21.73 |
| ATOM | 2598 | CA  | LEU | 1750 | 19.787 | -12.796 | 5.054  | 1.00 | 20.90 |
| ATOM | 2599 | CB  | LEU | 1750 | 19.752 | -11.308 | 5.359  | 1.00 | 18.60 |
| ATOM | 2600 | CG  | LEU | 1750 | 20.654 | -10.439 | 4.485  | 1.00 | 16.53 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2601 | CD1 | LEU | 1750 | 20.190 | -8.979  | 4.579  | 1.00 | 13.28 |
| ATOM | 2602 | CD2 | LEU | 1750 | 22.100 | -10.612 | 4.939  | 1.00 | 14.74 |
| ATOM | 2603 | C   | LEU | 1750 | 18.982 | -13.548 | 6.108  | 1.00 | 21.25 |
| ATOM | 2604 | O   | LEU | 1750 | 19.534 | -14.056 | 7.084  | 1.00 | 21.26 |
| ATOM | 2605 | N   | VAL | 1751 | 17.671 | -13.607 | 5.917  | 1.00 | 21.64 |
| ATOM | 2607 | CA  | VAL | 1751 | 16.793 | -14.289 | 6.845  | 1.00 | 21.21 |
| ATOM | 2608 | CB  | VAL | 1751 | 15.353 | -14.072 | 6.432  | 1.00 | 19.03 |
| ATOM | 2609 | CG1 | VAL | 1751 | 14.453 | -14.970 | 7.220  | 1.00 | 23.34 |
| ATOM | 2610 | CG2 | VAL | 1751 | 14.978 | -12.648 | 6.684  | 1.00 | 22.78 |
| ATOM | 2611 | C   | VAL | 1751 | 17.127 | -15.774 | 6.925  | 1.00 | 25.56 |
| ATOM | 2612 | O   | VAL | 1751 | 17.111 | -16.369 | 8.007  | 1.00 | 25.61 |
| ATOM | 2613 | N   | GLU | 1752 | 17.418 | -16.381 | 5.778  | 1.00 | 28.61 |
| ATOM | 2615 | CA  | GLU | 1752 | 17.773 | -17.789 | 5.755  | 1.00 | 32.38 |
| ATOM | 2616 | CB  | GLU | 1752 | 17.765 | -18.317 | 4.321  | 1.00 | 37.26 |
| ATOM | 2617 | CG  | GLU | 1752 | 16.399 | -18.218 | 3.651  | 1.00 | 44.76 |
| ATOM | 2618 | CD  | GLU | 1752 | 16.394 | -18.742 | 2.219  | 1.00 | 50.37 |
| ATOM | 2619 | OE1 | GLU | 1752 | 15.397 | -18.495 | 1.497  | 1.00 | 52.52 |
| ATOM | 2620 | OE2 | GLU | 1752 | 17.377 | -19.410 | 1.822  | 1.00 | 51.96 |
| ATOM | 2621 | C   | GLU | 1752 | 19.140 | -17.984 | 6.405  | 1.00 | 32.27 |
| ATOM | 2622 | O   | GLU | 1752 | 19.330 | -18.878 | 7.237  | 1.00 | 31.18 |
| ATOM | 2623 | N   | ASP | 1753 | 20.069 | -17.096 | 6.083  | 1.00 | 32.20 |
| ATOM | 2625 | CA  | ASP | 1753 | 21.411 | -17.174 | 6.647  | 1.00 | 35.13 |
| ATOM | 2626 | CB  | ASP | 1753 | 22.341 | -16.144 | 5.998  | 1.00 | 37.80 |
| ATOM | 2627 | CG  | ASP | 1753 | 22.498 | -16.358 | 4.502  | 1.00 | 41.13 |
| ATOM | 2628 | OD1 | ASP | 1753 | 22.222 | -17.470 | 4.007  | 1.00 | 43.01 |
| ATOM | 2629 | OD2 | ASP | 1753 | 22.908 | -15.401 | 3.811  | 1.00 | 44.26 |
| ATOM | 2630 | C   | ASP | 1753 | 21.379 | -16.986 | 8.153  | 1.00 | 33.84 |
| ATOM | 2631 | O   | ASP | 1753 | 21.971 | -17.773 | 8.901  | 1.00 | 36.22 |
| ATOM | 2632 | N   | LEU | 1754 | 20.652 | -15.978 | 8.633  | 1.00 | 30.73 |
| ATOM | 2634 | CA  | LEU | 1754 | 20.568 | -15.730 | 10.070 | 1.00 | 28.51 |
| ATOM | 2635 | CB  | LEU | 1754 | 19.881 | -14.394 | 10.355 | 1.00 | 25.20 |
| ATOM | 2636 | CG  | LEU | 1754 | 20.810 | -13.225 | 10.016 | 1.00 | 26.72 |
| ATOM | 2637 | CD1 | LEU | 1754 | 20.045 | -11.903 | 9.905  | 1.00 | 24.18 |
| ATOM | 2638 | CD2 | LEU | 1754 | 21.932 | -13.168 | 11.063 | 1.00 | 25.69 |
| ATOM | 2639 | C   | LEU | 1754 | 19.860 | -16.870 | 10.763 | 1.00 | 28.74 |
| ATOM | 2640 | O   | LEU | 1754 | 20.270 | -17.290 | 11.832 | 1.00 | 29.08 |
| ATOM | 2641 | N   | ASP | 1755 | 18.834 | -17.419 | 10.130 | 1.00 | 29.97 |
| ATOM | 2643 | CA  | ASP | 1755 | 18.109 | -18.519 | 10.732 | 1.00 | 31.58 |
| ATOM | 2644 | CB  | ASP | 1755 | 16.944 | -18.930 | 9.843  | 1.00 | 36.47 |
| ATOM | 2645 | CG  | ASP | 1755 | 16.100 | -20.005 | 10.467 | 1.00 | 39.40 |
| ATOM | 2646 | OD1 | ASP | 1755 | 15.731 | -19.869 | 11.651 | 1.00 | 45.91 |
| ATOM | 2647 | OD2 | ASP | 1755 | 15.813 | -20.995 | 9.774  | 1.00 | 45.68 |
| ATOM | 2648 | C   | ASP | 1755 | 19.040 | -19.703 | 10.952 | 1.00 | 32.29 |
| ATOM | 2649 | O   | ASP | 1755 | 18.978 | -20.380 | 11.979 | 1.00 | 31.66 |
| ATOM | 2650 | N   | ARG | 1756 | 19.926 | -19.923 | 9.989  | 1.00 | 32.32 |
| ATOM | 2652 | CA  | ARG | 1756 | 20.884 | -21.015 | 10.059 | 1.00 | 32.73 |
| ATOM | 2653 | CB  | ARG | 1756 | 21.598 | -21.145 | 8.704  | 1.00 | 34.47 |
| ATOM | 2654 | CG  | ARG | 1756 | 22.733 | -22.157 | 8.645  | 1.00 | 37.78 |
| ATOM | 2655 | CD  | ARG | 1756 | 23.299 | -22.274 | 7.237  | 1.00 | 43.87 |
| ATOM | 2656 | NE  | ARG | 1756 | 23.791 | -20.999 | 6.702  | 1.00 | 48.78 |
| ATOM | 2658 | CZ  | ARG | 1756 | 24.890 | -20.380 | 7.122  | 1.00 | 52.92 |
| ATOM | 2659 | NH1 | ARG | 1756 | 25.630 | -20.914 | 8.091  | 1.00 | 55.88 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2662 | NH2 | ARG | 1756 | 25.237 | -19.214 | 6.593  | 1.00 | 52.53 |
| ATOM | 2665 | C   | ARG | 1756 | 21.889 | -20.761 | 11.186 | 1.00 | 33.76 |
| ATOM | 2666 | O   | ARG | 1756 | 22.131 | -21.619 | 12.049 | 1.00 | 34.53 |
| ATOM | 2667 | N   | ILE | 1757 | 22.432 | -19.553 | 11.204 | 1.00 | 33.49 |
| ATOM | 2669 | CA  | ILE | 1757 | 23.405 | -19.176 | 12.205 | 1.00 | 32.71 |
| ATOM | 2670 | CB  | ILE | 1757 | 23.980 | -17.764 | 11.919 | 1.00 | 31.86 |
| ATOM | 2671 | CG2 | ILE | 1757 | 25.111 | -17.454 | 12.869 | 1.00 | 31.71 |
| ATOM | 2672 | CG1 | ILE | 1757 | 24.520 | -17.704 | 10.488 | 1.00 | 31.41 |
| ATOM | 2673 | CD1 | ILE | 1757 | 25.075 | -16.366 | 10.096 | 1.00 | 27.68 |
| ATOM | 2674 | C   | ILE | 1757 | 22.807 | -19.236 | 13.604 | 1.00 | 34.20 |
| ATOM | 2675 | O   | ILE | 1757 | 23.399 | -19.833 | 14.495 | 1.00 | 35.83 |
| ATOM | 2676 | N   | VAL | 1758 | 21.620 | -18.667 | 13.792 | 1.00 | 35.40 |
| ATOM | 2678 | CA  | VAL | 1758 | 20.981 | -18.653 | 15.108 | 1.00 | 37.49 |
| ATOM | 2679 | CB  | VAL | 1758 | 19.501 | -18.160 | 15.061 | 1.00 | 34.42 |
| ATOM | 2680 | CG1 | VAL | 1758 | 18.899 | -18.199 | 16.456 | 1.00 | 37.37 |
| ATOM | 2681 | CG2 | VAL | 1758 | 19.403 | -16.742 | 14.519 | 1.00 | 30.02 |
| ATOM | 2682 | C   | VAL | 1758 | 21.010 | -20.050 | 15.715 | 1.00 | 41.64 |
| ATOM | 2683 | O   | VAL | 1758 | 21.533 | -20.246 | 16.817 | 1.00 | 43.69 |
| ATOM | 2684 | N   | ALA | 1759 | 20.492 | -21.015 | 14.961 | 1.00 | 44.52 |
| ATOM | 2686 | CA  | ALA | 1759 | 20.434 | -22.415 | 15.387 | 1.00 | 45.20 |
| ATOM | 2687 | CB  | ALA | 1759 | 19.833 | -23.268 | 14.277 | 1.00 | 43.44 |
| ATOM | 2688 | C   | ALA | 1759 | 21.791 | -22.968 | 15.795 | 1.00 | 45.91 |
| ATOM | 2689 | O   | ALA | 1759 | 21.890 | -23.780 | 16.710 | 1.00 | 47.41 |
| ATOM | 2690 | N   | LEU | 1760 | 22.833 | -22.511 | 15.120 | 1.00 | 47.70 |
| ATOM | 2692 | CA  | LEU | 1760 | 24.190 | -22.960 | 15.399 | 1.00 | 50.91 |
| ATOM | 2693 | CB  | LEU | 1760 | 25.015 | -22.912 | 14.109 | 1.00 | 52.93 |
| ATOM | 2694 | CG  | LEU | 1760 | 24.448 | -23.723 | 12.947 | 1.00 | 57.55 |
| ATOM | 2695 | CD1 | LEU | 1760 | 25.189 | -23.390 | 11.660 | 1.00 | 60.76 |
| ATOM | 2696 | CD2 | LEU | 1760 | 24.539 | -25.208 | 13.273 | 1.00 | 58.66 |
| ATOM | 2697 | C   | LEU | 1760 | 24.882 | -22.111 | 16.472 | 1.00 | 52.07 |
| ATOM | 2698 | O   | LEU | 1760 | 25.967 | -22.459 | 16.953 | 1.00 | 51.95 |
| ATOM | 2699 | N   | THR | 1761 | 24.267 | -21.000 | 16.850 | 1.00 | 52.05 |
| ATOM | 2701 | CA  | THR | 1761 | 24.868 | -20.131 | 17.836 | 1.00 | 53.28 |
| ATOM | 2702 | CB  | THR | 1761 | 24.362 | -18.693 | 17.673 | 1.00 | 54.58 |
| ATOM | 2703 | OG1 | THR | 1761 | 24.633 | -18.259 | 16.339 | 1.00 | 53.68 |
| ATOM | 2705 | CG2 | THR | 1761 | 25.090 | -17.762 | 18.621 | 1.00 | 55.45 |
| ATOM | 2706 | C   | THR | 1761 | 24.715 | -20.619 | 19.272 | 1.00 | 53.31 |
| ATOM | 2707 | O   | THR | 1761 | 23.629 | -20.986 | 19.713 | 1.00 | 53.89 |
| ATOM | 2708 | N   | SER | 1762 | 25.832 | -20.617 | 19.993 | 1.00 | 53.51 |
| ATOM | 2710 | CA  | SER | 1762 | 25.876 | -21.045 | 21.383 | 1.00 | 53.15 |
| ATOM | 2711 | CB  | SER | 1762 | 27.340 | -21.131 | 21.830 | 1.00 | 57.27 |
| ATOM | 2712 | OG  | SER | 1762 | 27.492 | -21.872 | 23.028 | 1.00 | 61.22 |
| ATOM | 2714 | C   | SER | 1762 | 25.110 | -20.048 | 22.257 | 1.00 | 49.15 |
| ATOM | 2715 | O   | SER | 1762 | 25.229 | -18.831 | 22.071 | 1.00 | 46.61 |
| ATOM | 3466 | N   | ALA | 461  | 79.636 | 26.047  | 14.493 | 1.00 | 61.05 |
| ATOM | 3468 | CA  | ALA | 461  | 79.609 | 24.852  | 13.654 | 1.00 | 58.10 |
| ATOM | 3469 | CB  | ALA | 461  | 78.335 | 24.024  | 13.935 | 1.00 | 60.39 |
| ATOM | 3470 | C   | ALA | 461  | 79.694 | 25.239  | 12.179 | 1.00 | 54.65 |
| ATOM | 3471 | O   | ALA | 461  | 79.653 | 24.382  | 11.297 | 1.00 | 54.05 |
| ATOM | 3472 | N   | ALA | 462  | 79.867 | 26.537  | 11.935 | 1.00 | 51.68 |
| ATOM | 3474 | CA  | ALA | 462  | 79.972 | 27.085  | 10.584 | 1.00 | 48.47 |
| ATOM | 3475 | CB  | ALA | 462  | 80.099 | 28.619  | 10.633 | 1.00 | 46.99 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3476 | C   | ALA | 462 | 81.123 | 26.489 | 9.766  | 1.00 | 44.86 |
| ATOM | 3477 | O   | ALA | 462 | 80.918 | 26.097 | 8.625  | 1.00 | 43.40 |
| ATOM | 3478 | N   | TYR | 463 | 82.329 | 26.447 | 10.335 | 1.00 | 42.23 |
| ATOM | 3480 | CA  | TYR | 463 | 83.493 | 25.913 | 9.629  | 1.00 | 39.04 |
| ATOM | 3481 | CB  | TYR | 463 | 84.642 | 26.921 | 9.620  | 1.00 | 39.01 |
| ATOM | 3482 | CG  | TYR | 463 | 84.354 | 28.126 | 8.743  | 1.00 | 41.95 |
| ATOM | 3483 | CD1 | TYR | 463 | 84.073 | 29.373 | 9.308  | 1.00 | 42.40 |
| ATOM | 3484 | CE1 | TYR | 463 | 83.754 | 30.466 | 8.512  | 1.00 | 42.02 |
| ATOM | 3485 | CD2 | TYR | 463 | 84.311 | 28.009 | 7.345  | 1.00 | 40.70 |
| ATOM | 3486 | CE2 | TYR | 463 | 83.992 | 29.099 | 6.542  | 1.00 | 37.09 |
| ATOM | 3487 | CZ  | TYR | 463 | 83.716 | 30.320 | 7.134  | 1.00 | 39.19 |
| ATOM | 3488 | OH  | TYR | 463 | 83.401 | 31.406 | 6.360  | 1.00 | 40.66 |
| ATOM | 3490 | C   | TYR | 463 | 84.011 | 24.554 | 10.050 | 1.00 | 37.78 |
| ATOM | 3491 | O   | TYR | 463 | 84.627 | 23.863 | 9.237  | 1.00 | 38.35 |
| ATOM | 3492 | N   | GLU | 464 | 83.746 | 24.143 | 11.285 | 1.00 | 37.67 |
| ATOM | 3494 | CA  | GLU | 464 | 84.212 | 22.841 | 11.747 | 1.00 | 38.57 |
| ATOM | 3495 | CB  | GLU | 464 | 85.707 | 22.890 | 12.024 | 1.00 | 41.44 |
| ATOM | 3496 | CG  | GLU | 464 | 86.093 | 23.870 | 13.108 | 1.00 | 47.87 |
| ATOM | 3497 | CD  | GLU | 464 | 87.583 | 24.135 | 13.169 | 1.00 | 53.44 |
| ATOM | 3498 | OE1 | GLU | 464 | 87.998 | 24.983 | 13.990 | 1.00 | 56.72 |
| ATOM | 3499 | OE2 | GLU | 464 | 88.344 | 23.513 | 12.397 | 1.00 | 54.85 |
| ATOM | 3500 | C   | GLU | 464 | 83.504 | 22.393 | 13.001 | 1.00 | 38.15 |
| ATOM | 3501 | O   | GLU | 464 | 83.291 | 23.187 | 13.905 | 1.00 | 39.59 |
| ATOM | 3502 | N   | LEU | 465 | 83.121 | 21.124 | 13.051 | 1.00 | 37.13 |
| ATOM | 3504 | CA  | LEU | 465 | 82.457 | 20.608 | 14.236 | 1.00 | 37.93 |
| ATOM | 3505 | CB  | LEU | 465 | 81.502 | 19.456 | 13.894 | 1.00 | 33.43 |
| ATOM | 3506 | CG  | LEU | 465 | 80.455 | 19.609 | 12.787 | 1.00 | 31.12 |
| ATOM | 3507 | CD1 | LEU | 465 | 79.415 | 18.500 | 12.944 | 1.00 | 24.85 |
| ATOM | 3508 | CD2 | LEU | 465 | 79.797 | 20.980 | 12.855 | 1.00 | 29.05 |
| ATOM | 3509 | C   | LEU | 465 | 83.540 | 20.090 | 15.166 | 1.00 | 41.02 |
| ATOM | 3510 | O   | LEU | 465 | 84.703 | 19.936 | 14.763 | 1.00 | 40.24 |
| ATOM | 3511 | N   | PRO | 466 | 83.198 | 19.884 | 16.441 | 1.00 | 43.58 |
| ATOM | 3512 | CD  | PRO | 466 | 81.974 | 20.359 | 17.115 | 1.00 | 45.33 |
| ATOM | 3513 | CA  | PRO | 466 | 84.170 | 19.374 | 17.415 | 1.00 | 44.72 |
| ATOM | 3514 | CB  | PRO | 466 | 83.433 | 19.505 | 18.743 | 1.00 | 46.18 |
| ATOM | 3515 | CG  | PRO | 466 | 82.486 | 20.679 | 18.496 | 1.00 | 48.84 |
| ATOM | 3516 | C   | PRO | 466 | 84.447 | 17.909 | 17.101 | 1.00 | 44.52 |
| ATOM | 3517 | O   | PRO | 466 | 83.616 | 17.228 | 16.509 | 1.00 | 43.38 |
| ATOM | 3518 | N   | GLU | 467 | 85.610 | 17.421 | 17.492 | 1.00 | 47.75 |
| ATOM | 3520 | CA  | GLU | 467 | 85.932 | 16.035 | 17.218 | 1.00 | 51.03 |
| ATOM | 3521 | CB  | GLU | 467 | 87.354 | 15.913 | 16.659 | 1.00 | 56.11 |
| ATOM | 3522 | CG  | GLU | 467 | 87.615 | 14.557 | 16.000 | 1.00 | 62.27 |
| ATOM | 3523 | CD  | GLU | 467 | 88.927 | 14.489 | 15.242 | 1.00 | 66.39 |
| ATOM | 3524 | OE1 | GLU | 467 | 89.688 | 15.490 | 15.243 | 1.00 | 69.85 |
| ATOM | 3525 | OE2 | GLU | 467 | 89.182 | 13.418 | 14.643 | 1.00 | 66.09 |
| ATOM | 3526 | C   | GLU | 467 | 85.749 | 15.136 | 18.435 | 1.00 | 49.62 |
| ATOM | 3527 | O   | GLU | 467 | 85.767 | 15.601 | 19.578 | 1.00 | 49.62 |
| ATOM | 3528 | N   | ASP | 468 | 85.516 | 13.856 | 18.166 | 1.00 | 48.07 |
| ATOM | 3530 | CA  | ASP | 468 | 85.352 | 12.843 | 19.198 | 1.00 | 46.32 |
| ATOM | 3531 | CB  | ASP | 468 | 83.880 | 12.679 | 19.587 | 1.00 | 45.15 |
| ATOM | 3532 | CG  | ASP | 468 | 83.678 | 11.740 | 20.779 | 1.00 | 44.19 |
| ATOM | 3533 | OD1 | ASP | 468 | 82.544 | 11.709 | 21.309 | 1.00 | 42.04 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3534 | OD2 | ASP | 468 | 84.629 | 11.033 | 21.188 | 1.00 | 38.14 |
| ATOM | 3535 | C   | ASP | 468 | 85.877 | 11.556 | 18.580 | 1.00 | 45.54 |
| ATOM | 3536 | O   | ASP | 468 | 85.141 | 10.815 | 17.928 | 1.00 | 45.94 |
| ATOM | 3537 | N   | PRO | 469 | 87.181 | 11.308 | 18.732 | 1.00 | 45.89 |
| ATOM | 3538 | CD  | PRO | 469 | 88.111 | 12.189 | 19.464 | 1.00 | 45.11 |
| ATOM | 3539 | CA  | PRO | 469 | 87.885 | 10.130 | 18.215 | 1.00 | 45.91 |
| ATOM | 3540 | CB  | PRO | 469 | 89.208 | 10.187 | 18.968 | 1.00 | 45.90 |
| ATOM | 3541 | CG  | PRO | 469 | 89.456 | 11.662 | 19.042 | 1.00 | 45.73 |
| ATOM | 3542 | C   | PRO | 469 | 87.170 | 8.806  | 18.473 | 1.00 | 45.48 |
| ATOM | 3543 | O   | PRO | 469 | 87.188 | 7.905  | 17.629 | 1.00 | 46.83 |
| ATOM | 3544 | N   | ARG | 470 | 86.495 | 8.717  | 19.613 | 1.00 | 42.12 |
| ATOM | 3546 | CA  | ARG | 470 | 85.786 | 7.506  | 19.999 | 1.00 | 41.21 |
| ATOM | 3547 | CB  | ARG | 470 | 85.083 | 7.704  | 21.331 | 1.00 | 43.14 |
| ATOM | 3548 | CG  | ARG | 470 | 85.885 | 8.424  | 22.375 | 1.00 | 45.68 |
| ATOM | 3549 | CD  | ARG | 470 | 85.014 | 8.705  | 23.564 | 1.00 | 45.98 |
| ATOM | 3550 | NE  | ARG | 470 | 83.802 | 9.417  | 23.184 | 1.00 | 47.28 |
| ATOM | 3552 | CZ  | ARG | 470 | 82.921 | 9.877  | 24.057 | 1.00 | 50.54 |
| ATOM | 3553 | NH1 | ARG | 470 | 83.127 | 9.687  | 25.354 | 1.00 | 47.56 |
| ATOM | 3556 | NH2 | ARG | 470 | 81.843 | 10.527 | 23.637 | 1.00 | 54.59 |
| ATOM | 3559 | C   | ARG | 470 | 84.736 | 7.058  | 19.004 | 1.00 | 40.57 |
| ATOM | 3560 | O   | ARG | 470 | 84.411 | 5.877  | 18.941 | 1.00 | 43.13 |
| ATOM | 3561 | N   | TRP | 471 | 84.182 | 8.014  | 18.268 | 1.00 | 38.07 |
| ATOM | 3563 | CA  | TRP | 471 | 83.124 | 7.736  | 17.314 | 1.00 | 35.09 |
| ATOM | 3564 | CB  | TRP | 471 | 81.890 | 8.515  | 17.739 | 1.00 | 33.42 |
| ATOM | 3565 | CG  | TRP | 471 | 81.259 | 7.958  | 18.952 | 1.00 | 31.71 |
| ATOM | 3566 | CD2 | TRP | 471 | 80.512 | 6.740  | 19.026 | 1.00 | 34.81 |
| ATOM | 3567 | CE2 | TRP | 471 | 80.061 | 6.610  | 20.355 | 1.00 | 33.17 |
| ATOM | 3568 | CE3 | TRP | 471 | 80.174 | 5.744  | 18.092 | 1.00 | 37.60 |
| ATOM | 3569 | CD1 | TRP | 471 | 81.246 | 8.503  | 20.199 | 1.00 | 25.70 |
| ATOM | 3570 | NE1 | TRP | 471 | 80.525 | 7.697  | 21.051 | 1.00 | 28.79 |
| ATOM | 3572 | CZ2 | TRP | 471 | 79.289 | 5.522  | 20.776 | 1.00 | 35.80 |
| ATOM | 3573 | CZ3 | TRP | 471 | 79.409 | 4.660  | 18.509 | 1.00 | 35.52 |
| ATOM | 3574 | CH2 | TRP | 471 | 78.973 | 4.560  | 19.839 | 1.00 | 34.51 |
| ATOM | 3575 | C   | TRP | 471 | 83.432 | 8.065  | 15.872 | 1.00 | 35.77 |
| ATOM | 3576 | O   | TRP | 471 | 82.690 | 7.670  | 14.968 | 1.00 | 37.45 |
| ATOM | 3577 | N   | GLU | 472 | 84.533 | 8.770  | 15.651 | 1.00 | 34.76 |
| ATOM | 3579 | CA  | GLU | 472 | 84.895 | 9.184  | 14.308 | 1.00 | 34.51 |
| ATOM | 3580 | CB  | GLU | 472 | 86.065 | 10.174 | 14.365 | 1.00 | 32.30 |
| ATOM | 3581 | CG  | GLU | 472 | 86.221 | 11.038 | 13.103 | 1.00 | 36.57 |
| ATOM | 3582 | CD  | GLU | 472 | 85.082 | 12.035 | 12.872 | 1.00 | 36.34 |
| ATOM | 3583 | OE1 | GLU | 472 | 84.515 | 12.558 | 13.857 | 1.00 | 36.01 |
| ATOM | 3584 | OE2 | GLU | 472 | 84.777 | 12.318 | 11.694 | 1.00 | 31.95 |
| ATOM | 3585 | C   | GLU | 472 | 85.219 | 8.034  | 13.364 | 1.00 | 33.90 |
| ATOM | 3586 | O   | GLU | 472 | 85.896 | 7.082  | 13.745 | 1.00 | 33.77 |
| ATOM | 3587 | N   | LEU | 473 | 84.667 | 8.094  | 12.158 | 1.00 | 33.58 |
| ATOM | 3589 | CA  | LEU | 473 | 84.944 | 7.095  | 11.146 | 1.00 | 34.82 |
| ATOM | 3590 | CB  | LEU | 473 | 83.714 | 6.234  | 10.847 | 1.00 | 32.59 |
| ATOM | 3591 | CG  | LEU | 473 | 84.020 | 5.091  | 9.867  | 1.00 | 33.78 |
| ATOM | 3592 | CD1 | LEU | 473 | 84.786 | 4.000  | 10.578 | 1.00 | 32.94 |
| ATOM | 3593 | CD2 | LEU | 473 | 82.759 | 4.518  | 9.273  | 1.00 | 35.34 |
| ATOM | 3594 | C   | LEU | 473 | 85.380 | 7.828  | 9.883  | 1.00 | 37.95 |
| ATOM | 3595 | O   | LEU | 473 | 84.720 | 8.781  | 9.457  | 1.00 | 39.55 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3596 | N   | PRO | 474 | 86.522 | 7.423  | 9.299  | 1.00 | 38.99 |
| ATOM | 3597 | CD  | PRO | 474 | 87.455 | 6.453  | 9.899  | 1.00 | 38.76 |
| ATOM | 3598 | CA  | PRO | 474 | 87.094 | 8.004  | 8.080  | 1.00 | 39.37 |
| ATOM | 3599 | CB  | PRO | 474 | 88.382 | 7.201  | 7.906  | 1.00 | 40.18 |
| ATOM | 3600 | CG  | PRO | 474 | 88.767 | 6.883  | 9.310  | 1.00 | 37.76 |
| ATOM | 3601 | C   | PRO | 474 | 86.165 | 7.794  | 6.890  | 1.00 | 40.94 |
| ATOM | 3602 | O   | PRO | 474 | 85.865 | 6.653  | 6.532  | 1.00 | 43.98 |
| ATOM | 3603 | N   | ARG | 475 | 85.762 | 8.886  | 6.245  | 1.00 | 40.66 |
| ATOM | 3605 | CA  | ARG | 475 | 84.850 | 8.840  | 5.101  | 1.00 | 40.66 |
| ATOM | 3606 | CB  | ARG | 475 | 84.776 | 10.216 | 4.448  | 1.00 | 37.94 |
| ATOM | 3607 | CG  | ARG | 475 | 84.354 | 11.300 | 5.415  | 1.00 | 36.12 |
| ATOM | 3608 | CD  | ARG | 475 | 84.340 | 12.697 | 4.800  | 1.00 | 35.92 |
| ATOM | 3609 | NE  | ARG | 475 | 83.932 | 13.677 | 5.801  | 1.00 | 30.14 |
| ATOM | 3611 | CZ  | ARG | 475 | 82.671 | 13.878 | 6.170  | 1.00 | 28.45 |
| ATOM | 3612 | NH1 | ARG | 475 | 81.688 | 13.197 | 5.599  | 1.00 | 28.41 |
| ATOM | 3615 | NH2 | ARG | 475 | 82.410 | 14.666 | 7.197  | 1.00 | 27.85 |
| ATOM | 3618 | C   | ARG | 475 | 85.141 | 7.766  | 4.046  | 1.00 | 41.44 |
| ATOM | 3619 | O   | ARG | 475 | 84.223 | 7.189  | 3.470  | 1.00 | 41.40 |
| ATOM | 3620 | N   | ASP | 476 | 86.419 | 7.475  | 3.830  | 1.00 | 44.99 |
| ATOM | 3622 | CA  | ASP | 476 | 86.836 | 6.477  | 2.849  | 1.00 | 50.62 |
| ATOM | 3623 | CB  | ASP | 476 | 88.344 | 6.540  | 2.644  | 1.00 | 54.47 |
| ATOM | 3624 | CG  | ASP | 476 | 89.105 | 5.969  | 3.819  | 1.00 | 60.03 |
| ATOM | 3625 | OD1 | ASP | 476 | 89.569 | 4.810  | 3.722  | 1.00 | 65.09 |
| ATOM | 3626 | OD2 | ASP | 476 | 89.216 | 6.669  | 4.846  | 1.00 | 62.62 |
| ATOM | 3627 | C   | ASP | 476 | 86.436 | 5.054  | 3.263  | 1.00 | 51.16 |
| ATOM | 3628 | O   | ASP | 476 | 86.678 | 4.091  | 2.530  | 1.00 | 53.06 |
| ATOM | 3629 | N   | ARG | 477 | 95.900 | 4.916  | 4.471  | 1.00 | 49.58 |
| ATOM | 3631 | CA  | ARG | 477 | 85.443 | 3.623  | 4.968  | 1.00 | 47.34 |
| ATOM | 3632 | CB  | ARG | 477 | 86.040 | 3.359  | 6.341  | 1.00 | 48.85 |
| ATOM | 3633 | CG  | ARG | 477 | 87.481 | 2.924  | 6.265  | 1.00 | 52.11 |
| ATOM | 3634 | CD  | ARG | 477 | 88.169 | 3.079  | 7.591  | 1.00 | 53.63 |
| ATOM | 3635 | NE  | ARG | 477 | 87.515 | 2.345  | 8.665  | 1.00 | 54.86 |
| ATOM | 3637 | CZ  | ARG | 477 | 87.932 | 2.363  | 9.927  | 1.00 | 57.15 |
| ATOM | 3638 | NH1 | ARG | 477 | 89.000 | 3.076  | 10.264 | 1.00 | 55.98 |
| ATOM | 3641 | NH2 | ARG | 477 | 87.269 | 1.691  | 10.855 | 1.00 | 58.31 |
| ATOM | 3644 | C   | ARG | 477 | 83.915 | 3.563  | 5.020  | 1.00 | 44.70 |
| ATOM | 3645 | O   | ARG | 477 | 83.339 | 2.780  | 5.770  | 1.00 | 44.63 |
| ATOM | 3646 | N   | LEU | 478 | 83.274 | 4.366  | 4.179  | 1.00 | 41.95 |
| ATOM | 3648 | CA  | LEU | 478 | 81.832 | 4.440  | 4.118  | 1.00 | 38.58 |
| ATOM | 3649 | CB  | LEU | 478 | 81.374 | 5.609  | 4.980  | 1.00 | 33.17 |
| ATOM | 3650 | CG  | LEU | 478 | 79.872 | 5.731  | 5.183  | 1.00 | 29.07 |
| ATOM | 3651 | CD1 | LEU | 478 | 79.393 | 4.592  | 6.052  | 1.00 | 28.25 |
| ATOM | 3652 | CD2 | LEU | 478 | 79.590 | 7.059  | 5.836  | 1.00 | 30.79 |
| ATOM | 3653 | C   | LEU | 478 | 81.432 | 4.710  | 2.674  | 1.00 | 38.93 |
| ATOM | 3654 | O   | LEU | 478 | 81.938 | 5.647  | 2.071  | 1.00 | 41.75 |
| ATOM | 3655 | N   | VAL | 479 | 80.562 | 3.880  | 2.107  | 1.00 | 37.96 |
| ATOM | 3657 | CA  | VAL | 479 | 80.113 | 4.086  | 0.730  | 1.00 | 37.87 |
| ATOM | 3658 | CB  | VAL | 479 | 80.468 | 2.882  | -0.192 | 1.00 | 36.47 |
| ATOM | 3659 | CG1 | VAL | 479 | 80.001 | 3.145  | -1.612 | 1.00 | 34.43 |
| ATOM | 3660 | CG2 | VAL | 479 | 81.972 | 2.651  | -0.187 | 1.00 | 34.33 |
| ATOM | 3661 | C   | VAL | 479 | 78.609 | 4.299  | 0.775  | 1.00 | 38.10 |
| ATOM | 3662 | O   | VAL | 479 | 77.846 | 3.366  | 1.019  | 1.00 | 40.13 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3663 | N   | LEU | 480 | 78.184 | 5.537  | 0.552  | 1.00 | 38.05 |
| ATOM | 3665 | CA  | LEU | 480 | 76.766 | 5.879  | 0.606  | 1.00 | 35.90 |
| ATOM | 3666 | CB  | LEU | 480 | 76.568 | 7.393  | 0.475  | 1.00 | 33.98 |
| ATOM | 3667 | CG  | LEU | 480 | 77.276 | 8.257  | 1.536  | 1.00 | 32.84 |
| ATOM | 3668 | CD1 | LEU | 480 | 77.003 | 9.749  | 1.273  | 1.00 | 29.68 |
| ATOM | 3669 | CD2 | LEU | 480 | 76.828 | 7.861  | 2.943  | 1.00 | 26.03 |
| ATOM | 3670 | C   | LEU | 480 | 76.015 | 5.146  | -0.476 | 1.00 | 34.99 |
| ATOM | 3671 | O   | LEU | 480 | 76.573 | 4.864  | -1.526 | 1.00 | 36.12 |
| ATOM | 3672 | N   | GLY | 481 | 74.753 | 4.836  | -0.223 | 1.00 | 35.21 |
| ATOM | 3674 | CA  | GLY | 481 | 73.965 | 4.120  | -1.204 | 1.00 | 34.79 |
| ATOM | 3675 | C   | GLY | 481 | 72.544 | 4.608  | -1.332 | 1.00 | 36.31 |
| ATOM | 3676 | O   | GLY | 481 | 72.237 | 5.775  | -1.046 | 1.00 | 38.30 |
| ATOM | 3677 | N   | LYS | 482 | 71.665 | 3.705  | -1.761 | 1.00 | 35.59 |
| ATOM | 3679 | CA  | LYS | 482 | 70.257 | 4.007  | -1.959 | 1.00 | 35.24 |
| ATOM | 3680 | CB  | LYS | 482 | 69.488 | 2.698  | -2.207 | 1.00 | 35.69 |
| ATOM | 3681 | C   | LYS | 482 | 69.585 | 4.763  | -0.823 | 1.00 | 36.31 |
| ATOM | 3682 | O   | LYS | 482 | 69.752 | 4.421  | 0.352  | 1.00 | 34.90 |
| ATOM | 3683 | N   | PRO | 483 | 68.787 | 5.786  | -1.157 | 1.00 | 38.08 |
| ATOM | 3684 | CD  | PRO | 483 | 68.432 | 6.320  | -2.483 | 1.00 | 39.57 |
| ATOM | 3685 | CA  | PRO | 483 | 68.097 | 6.566  | -0.135 | 1.00 | 41.08 |
| ATOM | 3686 | CB  | PRO | 483 | 67.300 | 7.560  | -0.987 | 1.00 | 39.80 |
| ATOM | 3687 | CG  | PRO | 483 | 68.268 | 7.819  | -2.157 | 1.00 | 37.87 |
| ATOM | 3688 | C   | PRO | 483 | 67.130 | 5.652  | 0.606  | 1.00 | 42.11 |
| ATOM | 3689 | O   | PRO | 483 | 66.306 | 4.994  | -0.025 | 1.00 | 43.01 |
| ATOM | 3690 | N   | LEU | 484 | 67.199 | 5.624  | 1.937  | 1.00 | 41.06 |
| ATOM | 3692 | CA  | LEU | 484 | 66.293 | 4.823  | 2.751  | 1.00 | 38.47 |
| ATOM | 3693 | CB  | LEU | 484 | 67.040 | 4.307  | 3.990  | 1.00 | 32.45 |
| ATOM | 3694 | CG  | LEU | 484 | 67.968 | 3.098  | 3.809  | 1.00 | 27.68 |
| ATOM | 3695 | CD1 | LEU | 484 | 68.569 | 2.710  | 5.147  | 1.00 | 20.29 |
| ATOM | 3696 | CD2 | LEU | 484 | 67.181 | 1.964  | 3.225  | 1.00 | 23.20 |
| ATOM | 3697 | C   | LEU | 484 | 65.084 | 5.637  | 3.180  | 1.00 | 42.18 |
| ATOM | 3698 | O   | LEU | 484 | 65.227 | 6.699  | 3.814  | 1.00 | 44.50 |
| ATOM | 3699 | N   | GLY | 485 | 63.893 | 5.170  | 2.817  | 1.00 | 45.68 |
| ATOM | 3701 | CA  | GLY | 485 | 62.692 | 5.863  | 3.220  | 1.00 | 49.88 |
| ATOM | 3702 | C   | GLY | 485 | 62.216 | 7.008  | 2.337  | 1.00 | 53.01 |
| ATOM | 3703 | O   | GLY | 485 | 62.438 | 7.005  | 1.117  | 1.00 | 50.26 |
| ATOM | 3704 | N   | GLU | 486 | 61.592 | 8.020  | 2.949  | 1.00 | 56.24 |
| ATOM | 3706 | CA  | GLU | 486 | 61.064 | 9.183  | 2.257  | 1.00 | 58.07 |
| ATOM | 3707 | CB  | GLU | 486 | 59.666 | 8.845  | 1.682  | 1.00 | 55.60 |
| ATOM | 3708 | C   | GLU | 486 | 60.995 | 10.477 | 3.088  | 1.00 | 59.35 |
| ATOM | 3709 | O   | GLU | 486 | 60.019 | 11.226 | 3.000  | 1.00 | 61.44 |
| ATOM | 3710 | N   | GLY | 487 | 62.027 | 10.747 | 3.879  | 1.00 | 59.60 |
| ATOM | 3712 | CA  | GLY | 487 | 62.066 | 11.964 | 4.652  | 1.00 | 59.75 |
| ATOM | 3713 | C   | GLY | 487 | 61.337 | 11.959 | 5.974  | 1.00 | 61.44 |
| ATOM | 3714 | O   | GLY | 487 | 61.231 | 12.979 | 6.627  | 1.00 | 61.96 |
| ATOM | 3715 | N   | ALA | 488 | 60.820 | 10.800 | 6.377  | 1.00 | 59.69 |
| ATOM | 3717 | CA  | ALA | 488 | 60.134 | 10.709 | 7.657  | 1.00 | 57.27 |
| ATOM | 3718 | CB  | ALA | 488 | 59.489 | 9.337  | 7.825  | 1.00 | 58.05 |
| ATOM | 3719 | C   | ALA | 488 | 61.137 | 10.970 | 8.754  | 1.00 | 56.28 |
| ATOM | 3720 | O   | ALA | 488 | 60.810 | 11.446 | 9.834  | 1.00 | 57.31 |
| ATOM | 3721 | N   | PHE | 489 | 62.389 | 10.630 | 8.480  | 1.00 | 54.40 |
| ATOM | 3723 | CA  | PHE | 489 | 63.462 | 10.830 | 9.466  | 1.00 | 54.56 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3724 | CB  | PHE | 489 | 64.161 | 9.500  | 9.770  | 1.00 | 49.88 |
| ATOM | 3725 | CG  | PHE | 489 | 63.222 | 8.454  | 10.352 | 1.00 | 45.21 |
| ATOM | 3726 | CD1 | PHE | 489 | 62.505 | 7.585  | 9.516  | 1.00 | 43.48 |
| ATOM | 3727 | CD2 | PHE | 489 | 63.017 | 8.344  | 11.738 | 1.00 | 40.99 |
| ATOM | 3728 | CE1 | PHE | 489 | 61.625 | 6.653  | 10.039 | 1.00 | 36.69 |
| ATOM | 3729 | CE2 | PHE | 489 | 62.138 | 7.411  | 12.257 | 1.00 | 35.02 |
| ATOM | 3730 | CZ  | PHE | 489 | 61.433 | 6.558  | 11.407 | 1.00 | 34.73 |
| ATOM | 3731 | C   | PHE | 489 | 64.456 | 11.896 | 8.974  | 1.00 | 56.31 |
| ATOM | 3732 | O   | PHE | 489 | 65.372 | 12.276 | 9.692  | 1.00 | 59.05 |
| ATOM | 3733 | N   | GLY | 490 | 64.285 | 12.375 | 7.735  | 1.00 | 56.56 |
| ATOM | 3735 | CA  | GLY | 490 | 65.141 | 13.400 | 7.143  | 1.00 | 55.60 |
| ATOM | 3736 | C   | GLY | 490 | 65.899 | 12.778 | 5.993  | 1.00 | 54.79 |
| ATOM | 3737 | O   | GLY | 490 | 65.357 | 11.854 | 5.366  | 1.00 | 57.10 |
| ATOM | 3738 | N   | GLN | 491 | 67.073 | 13.304 | 5.634  | 1.00 | 53.44 |
| ATOM | 3740 | CA  | GLN | 491 | 67.829 | 12.658 | 4.562  | 1.00 | 52.60 |
| ATOM | 3741 | CB  | GLN | 491 | 68.760 | 13.580 | 3.777  | 1.00 | 53.48 |
| ATOM | 3742 | CG  | GLN | 491 | 69.422 | 12.818 | 2.629  | 1.00 | 57.19 |
| ATOM | 3743 | CD  | GLN | 491 | 70.046 | 13.696 | 1.548  | 1.00 | 62.09 |
| ATOM | 3744 | OE1 | GLN | 491 | 70.113 | 14.893 | 1.701  | 1.00 | 70.26 |
| ATOM | 3745 | NE2 | GLN | 491 | 70.453 | 13.082 | 0.441  | 1.00 | 62.78 |
| ATOM | 3748 | C   | GLN | 491 | 68.632 | 11.518 | 5.165  | 1.00 | 49.89 |
| ATOM | 3749 | O   | GLN | 491 | 69.669 | 11.704 | 5.805  | 1.00 | 49.56 |
| ATOM | 3750 | N   | VAL | 492 | 68.103 | 10.318 | 4.984  | 1.00 | 47.93 |
| ATOM | 3752 | CA  | VAL | 492 | 68.705 | 9.093  | 5.456  | 1.00 | 46.38 |
| ATOM | 3753 | CB  | VAL | 492 | 67.760 | 8.320  | 6.412  | 1.00 | 45.61 |
| ATOM | 3754 | CG1 | VAL | 492 | 68.412 | 7.045  | 6.932  | 1.00 | 46.70 |
| ATOM | 3755 | CG2 | VAL | 492 | 67.361 | 9.211  | 7.606  | 1.00 | 46.97 |
| ATOM | 3756 | C   | VAL | 492 | 69.004 | 8.200  | 4.253  | 1.00 | 45.23 |
| ATOM | 3757 | O   | VAL | 492 | 68.181 | 8.044  | 3.349  | 1.00 | 45.17 |
| ATOM | 3758 | N   | VAL | 493 | 70.210 | 7.654  | 4.208  | 1.00 | 43.75 |
| ATOM | 3760 | CA  | VAL | 493 | 70.599 | 6.780  | 3.109  | 1.00 | 44.71 |
| ATOM | 3761 | CB  | VAL | 493 | 71.608 | 7.471  | 2.148  | 1.00 | 46.20 |
| ATOM | 3762 | CG1 | VAL | 493 | 71.159 | 8.902  | 1.838  | 1.00 | 46.16 |
| ATOM | 3763 | CG2 | VAL | 493 | 73.045 | 7.428  | 2.706  | 1.00 | 42.06 |
| ATOM | 3764 | C   | VAL | 493 | 71.205 | 5.482  | 3.624  | 1.00 | 44.09 |
| ATOM | 3765 | O   | VAL | 493 | 71.701 | 5.402  | 4.745  | 1.00 | 43.73 |
| ATOM | 3766 | N   | LEU | 494 | 71.102 | 4.448  | 2.809  | 1.00 | 43.38 |
| ATOM | 3768 | CA  | LEU | 494 | 71.682 | 3.158  | 3.142  | 1.00 | 43.29 |
| ATOM | 3769 | CB  | LEU | 494 | 70.988 | 2.030  | 2.366  | 1.00 | 43.38 |
| ATOM | 3770 | CG  | LEU | 494 | 71.563 | 0.614  | 2.431  | 1.00 | 39.77 |
| ATOM | 3771 | CD1 | LEU | 494 | 71.809 | 0.201  | 3.850  | 1.00 | 36.38 |
| ATOM | 3772 | CD2 | LEU | 494 | 70.600 | -0.337 | 1.760  | 1.00 | 42.50 |
| ATOM | 3773 | C   | LEU | 494 | 73.139 | 3.280  | 2.725  | 1.00 | 42.72 |
| ATOM | 3774 | O   | LEU | 494 | 73.435 | 3.929  | 1.720  | 1.00 | 43.83 |
| ATOM | 3775 | N   | ALA | 495 | 74.044 | 2.698  | 3.499  | 1.00 | 40.80 |
| ATOM | 3777 | CA  | ALA | 495 | 75.456 | 2.785  | 3.183  | 1.00 | 43.80 |
| ATOM | 3778 | CB  | ALA | 495 | 76.059 | 4.032  | 3.821  | 1.00 | 43.76 |
| ATOM | 3779 | C   | ALA | 495 | 76.171 | 1.546  | 3.682  | 1.00 | 46.68 |
| ATOM | 3780 | O   | ALA | 495 | 75.668 | 0.838  | 4.551  | 1.00 | 48.52 |
| ATOM | 3781 | N   | GLU | 496 | 77.330 | 1.258  | 3.104  | 1.00 | 49.13 |
| ATOM | 3783 | CA  | GLU | 496 | 78.112 | 0.103  | 3.519  | 1.00 | 49.79 |
| ATOM | 3784 | CB  | GLU | 496 | 78.524 | -0.732 | 2.318  | 1.00 | 53.83 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3785 | CG  | GLU | 496 | 77.350 | -1.224 | 1.496  | 1.00 | 61.33 |
| ATOM | 3786 | CD  | GLU | 496 | 77.623 | -2.561 | 0.862  | 1.00 | 64.74 |
| ATOM | 3787 | OE1 | GLU | 496 | 76.704 | -3.411 | 0.883  | 1.00 | 70.08 |
| ATOM | 3788 | OE2 | GLU | 496 | 78.751 | -2.760 | 0.356  | 1.00 | 64.12 |
| ATOM | 3789 | C   | GLU | 496 | 79.333 | 0.601  | 4.230  | 1.00 | 48.46 |
| ATOM | 3790 | O   | GLU | 496 | 80.192 | 1.236  | 3.631  | 1.00 | 48.79 |
| ATOM | 3791 | N   | ALA | 497 | 79.373 | 0.375  | 5.530  | 1.00 | 49.25 |
| ATOM | 3793 | CA  | ALA | 497 | 80.503 | 0.810  | 6.334  | 1.00 | 49.99 |
| ATOM | 3794 | CB  | ALA | 497 | 80.048 | 1.156  | 7.732  | 1.00 | 48.16 |
| ATOM | 3795 | C   | ALA | 497 | 81.544 | -0.301 | 6.373  | 1.00 | 51.53 |
| ATOM | 3796 | O   | ALA | 497 | 81.191 | -1.473 | 6.409  | 1.00 | 52.41 |
| ATOM | 3797 | N   | ILE | 498 | 82.821 | 0.061  | 6.335  | 1.00 | 52.35 |
| ATOM | 3799 | CA  | ILE | 498 | 83.892 | -0.928 | 6.369  | 1.00 | 52.03 |
| ATOM | 3800 | CB  | ILE | 498 | 84.843 | -0.797 | 5.145  | 1.00 | 52.83 |
| ATOM | 3801 | CG2 | ILE | 498 | 85.990 | -1.795 | 5.253  | 1.00 | 51.43 |
| ATOM | 3802 | CG1 | ILE | 498 | 84.077 | -1.006 | 3.830  | 1.00 | 53.85 |
| ATOM | 3803 | CD1 | ILE | 498 | 83.411 | 0.254  | 3.271  | 1.00 | 55.62 |
| ATOM | 3804 | C   | ILE | 498 | 84.702 | -0.802 | 7.654  | 1.00 | 52.74 |
| ATOM | 3805 | O   | ILE | 498 | 85.133 | 0.293  | 8.026  | 1.00 | 52.14 |
| ATOM | 3806 | N   | GLY | 499 | 84.835 | -1.926 | 8.354  | 1.00 | 52.58 |
| ATOM | 3808 | CA  | GLY | 499 | 85.600 | -1.974 | 9.592  | 1.00 | 53.03 |
| ATOM | 3809 | C   | GLY | 499 | 85.165 | -1.113 | 10.771 | 1.00 | 53.67 |
| ATOM | 3810 | O   | GLY | 499 | 86.012 | -0.544 | 11.463 | 1.00 | 53.99 |
| ATOM | 3811 | N   | LEU | 500 | 83.862 | -1.045 | 11.034 | 1.00 | 53.60 |
| ATOM | 3813 | CA  | LEU | 500 | 83.337 | -0.245 | 12.141 | 1.00 | 51.00 |
| ATOM | 3814 | CB  | LEU | 500 | 81.841 | -0.499 | 12.317 | 1.00 | 49.38 |
| ATOM | 3815 | CG  | LEU | 500 | 80.901 | -0.024 | 11.212 | 1.00 | 47.62 |
| ATOM | 3816 | CD1 | LEU | 500 | 79.483 | -0.454 | 11.543 | 1.00 | 47.25 |
| ATOM | 3817 | CD2 | LEU | 500 | 80.992 | 1.486  | 11.081 | 1.00 | 47.38 |
| ATOM | 3818 | C   | LEU | 500 | 84.060 | -0.573 | 13.433 | 1.00 | 51.05 |
| ATOM | 3819 | O   | LEU | 500 | 84.396 | -1.734 | 13.670 | 1.00 | 53.76 |
| ATOM | 3820 | N   | PRO | 505 | 87.588 | -5.968 | 10.545 | 1.00 | 81.81 |
| ATOM | 3821 | CD  | PRO | 505 | 88.588 | -6.677 | 11.357 | 1.00 | 81.96 |
| ATOM | 3822 | CA  | PRO | 505 | 88.105 | -4.664 | 10.109 | 1.00 | 80.56 |
| ATOM | 3823 | CB  | PRO | 505 | 89.501 | -4.622 | 10.735 | 1.00 | 80.75 |
| ATOM | 3824 | CG  | PRO | 505 | 89.868 | -6.070 | 10.860 | 1.00 | 82.32 |
| ATOM | 3825 | C   | PRO | 505 | 88.139 | -4.477 | 8.588  | 1.00 | 78.53 |
| ATOM | 3826 | O   | PRO | 505 | 88.462 | -3.400 | 8.085  | 1.00 | 77.85 |
| ATOM | 3827 | N   | ASN | 506 | 87.792 | -5.532 | 7.865  | 1.00 | 77.09 |
| ATOM | 3829 | CA  | ASN | 506 | 87.747 | -5.484 | 6.411  | 1.00 | 75.57 |
| ATOM | 3830 | CB  | ASN | 506 | 88.799 | -6.415 | 5.806  | 1.00 | 75.80 |
| ATOM | 3831 | C   | ASN | 506 | 86.347 | -5.929 | 6.008  | 1.00 | 74.33 |
| ATOM | 3832 | O   | ASN | 506 | 86.044 | -6.117 | 4.826  | 1.00 | 73.76 |
| ATOM | 3833 | N   | ARG | 507 | 85.496 | -6.092 | 7.018  | 1.00 | 71.72 |
| ATOM | 3835 | CA  | ARG | 507 | 84.120 | -6.509 | 6.820  | 1.00 | 69.28 |
| ATOM | 3836 | CB  | ARG | 507 | 83.619 | -7.257 | 8.054  | 1.00 | 70.64 |
| ATOM | 3837 | C   | ARG | 507 | 83.258 | -5.284 | 6.605  | 1.00 | 65.87 |
| ATOM | 3838 | O   | ARG | 507 | 83.445 | -4.262 | 7.274  | 1.00 | 65.40 |
| ATOM | 3839 | N   | VAL | 508 | 82.363 | -5.358 | 5.628  | 1.00 | 62.01 |
| ATOM | 3841 | CA  | VAL | 508 | 81.464 | -4.248 | 5.381  | 1.00 | 58.41 |
| ATOM | 3842 | CB  | VAL | 508 | 81.043 | -4.136 | 3.915  | 1.00 | 57.18 |
| ATOM | 3843 | CG1 | VAL | 508 | 82.251 | -3.893 | 3.046  | 1.00 | 61.04 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3844 | CG2 | VAL | 508 | 80.310 | -5.383 | 3.466  | 1.00 | 60.74 |
| ATOM | 3845 | C   | VAL | 508 | 80.257 | -4.552 | 6.246  | 1.00 | 56.61 |
| ATOM | 3846 | O   | VAL | 508 | 79.964 | -5.716 | 6.529  | 1.00 | 55.82 |
| ATOM | 3847 | N   | THR | 509 | 79.572 | -3.501 | 6.665  | 1.00 | 54.85 |
| ATOM | 3849 | CA  | THR | 509 | 78.396 | -3.610 | 7.501  | 1.00 | 49.28 |
| ATOM | 3850 | CB  | THR | 509 | 78.705 | -3.144 | 8.934  | 1.00 | 47.98 |
| ATOM | 3851 | OG1 | THR | 509 | 79.938 | -3.727 | 9.356  | 1.00 | 43.39 |
| ATOM | 3853 | CG2 | THR | 509 | 77.606 | -3.565 | 9.903  | 1.00 | 47.57 |
| ATOM | 3854 | C   | THR | 509 | 77.381 | -2.674 | 6.865  | 1.00 | 46.71 |
| ATOM | 3855 | O   | THR | 509 | 77.675 | -1.507 | 6.625  | 1.00 | 48.59 |
| ATOM | 3856 | N   | LYS | 510 | 76.238 | -3.208 | 6.470  | 1.00 | 44.75 |
| ATOM | 3858 | CA  | LYS | 510 | 75.202 | -2.372 | 5.889  | 1.00 | 44.42 |
| ATOM | 3859 | CB  | LYS | 510 | 74.069 | -3.259 | 5.365  | 1.00 | 46.34 |
| ATOM | 3860 | CG  | LYS | 510 | 73.226 | -2.622 | 4.284  | 1.00 | 54.93 |
| ATOM | 3861 | CD  | LYS | 510 | 73.825 | -2.807 | 2.899  | 1.00 | 58.33 |
| ATOM | 3862 | CE  | LYS | 510 | 73.118 | -3.931 | 2.152  | 1.00 | 59.17 |
| ATOM | 3863 | NZ  | LYS | 510 | 73.317 | -5.251 | 2.813  | 1.00 | 56.09 |
| ATOM | 3867 | C   | LYS | 510 | 74.734 | -1.499 | 7.075  | 1.00 | 40.83 |
| ATOM | 3868 | O   | LYS | 510 | 74.480 | -2.020 | 8.162  | 1.00 | 38.59 |
| ATOM | 3869 | N   | VAL | 511 | 74.679 | -0.183 | 6.891  | 1.00 | 36.28 |
| ATOM | 3871 | CA  | VAL | 511 | 74.265 | 0.720  | 7.957  | 1.00 | 31.41 |
| ATOM | 3872 | CB  | VAL | 511 | 75.480 | 1.389  | 8.690  | 1.00 | 32.80 |
| ATOM | 3873 | CG1 | VAL | 511 | 76.315 | 0.346  | 9.420  | 1.00 | 29.97 |
| ATOM | 3874 | CG2 | VAL | 511 | 76.353 | 2.175  | 7.706  | 1.00 | 30.20 |
| ATOM | 3875 | C   | VAL | 511 | 73.408 | 1.812  | 7.360  | 1.00 | 28.40 |
| ATOM | 3876 | O   | VAL | 511 | 73.305 | 1.914  | 6.147  | 1.00 | 27.45 |
| ATOM | 3877 | N   | ALA | 512 | 72.756 | 2.598  | 8.207  | 1.00 | 27.30 |
| ATOM | 3879 | CA  | ALA | 512 | 71.953 | 3.701  | 7.715  | 1.00 | 26.66 |
| ATOM | 3880 | CB  | ALA | 512 | 70.557 | 3.640  | 8.278  | 1.00 | 24.24 |
| ATOM | 3881 | C   | ALA | 512 | 72.670 | 4.965  | 8.173  | 1.00 | 28.52 |
| ATOM | 3882 | O   | ALA | 512 | 73.140 | 5.036  | 9.319  | 1.00 | 26.66 |
| ATOM | 3883 | N   | VAL | 513 | 72.768 | 5.949  | 7.275  | 1.00 | 29.18 |
| ATOM | 3885 | CA  | VAL | 513 | 73.442 | 7.217  | 7.569  | 1.00 | 29.65 |
| ATOM | 3886 | CB  | VAL | 513 | 74.631 | 7.482  | 6.601  | 1.00 | 28.93 |
| ATOM | 3887 | CG1 | VAL | 513 | 75.384 | 8.722  | 7.015  | 1.00 | 25.51 |
| ATOM | 3888 | CG2 | VAL | 513 | 75.570 | 6.292  | 6.550  | 1.00 | 29.45 |
| ATOM | 3889 | C   | VAL | 513 | 72.509 | 8.407  | 7.476  | 1.00 | 30.45 |
| ATOM | 3890 | O   | VAL | 513 | 71.900 | 8.646  | 6.431  | 1.00 | 30.15 |
| ATOM | 3891 | N   | LYS | 514 | 72.402 | 9.143  | 8.578  | 1.00 | 33.29 |
| ATOM | 3893 | CA  | LYS | 514 | 71.575 | 10.357 | 8.654  | 1.00 | 33.28 |
| ATOM | 3894 | CB  | LYS | 514 | 71.017 | 10.537 | 10.068 | 1.00 | 38.67 |
| ATOM | 3895 | CG  | LYS | 514 | 70.074 | 9.456  | 10.531 | 1.00 | 45.73 |
| ATOM | 3896 | CD  | LYS | 514 | 69.462 | 9.860  | 11.855 | 1.00 | 53.93 |
| ATOM | 3897 | CE  | LYS | 514 | 68.450 | 8.840  | 12.337 | 1.00 | 63.59 |
| ATOM | 3898 | NZ  | LYS | 514 | 67.206 | 8.823  | 11.517 | 1.00 | 71.90 |
| ATOM | 3902 | C   | LYS | 514 | 72.451 | 11.568 | 8.312  | 1.00 | 29.45 |
| ATOM | 3903 | O   | LYS | 514 | 73.584 | 11.673 | 8.794  | 1.00 | 25.64 |
| ATOM | 3904 | N   | MET | 515 | 71.918 | 12.495 | 7.522  | 1.00 | 29.42 |
| ATOM | 3906 | CA  | MET | 515 | 72.668 | 13.690 | 7.119  | 1.00 | 30.46 |
| ATOM | 3907 | CB  | MET | 515 | 73.464 | 13.391 | 5.846  | 1.00 | 29.63 |
| ATOM | 3908 | CG  | MET | 515 | 72.557 | 13.070 | 4.665  | 1.00 | 32.48 |
| ATOM | 3909 | SD  | MET | 515 | 73.391 | 12.475 | 3.218  | 1.00 | 33.06 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3910 | CE  | MET | 515 | 73.734 | 10.809 | 3.715  | 1.00 | 30.26 |
| ATOM | 3911 | C   | MET | 515 | 71.700 | 14.839 | 6.848  | 1.00 | 30.75 |
| ATOM | 3912 | O   | MET | 515 | 70.478 | 14.654 | 6.867  | 1.00 | 33.07 |
| ATOM | 3913 | N   | LEU | 516 | 72.238 | 16.027 | 6.608  | 1.00 | 30.32 |
| ATOM | 3915 | CA  | LEU | 516 | 71.414 | 17.194 | 6.304  | 1.00 | 30.21 |
| ATOM | 3916 | CB  | LEU | 516 | 72.112 | 18.487 | 6.748  | 1.00 | 26.54 |
| ATOM | 3917 | CG  | LEU | 516 | 72.452 | 18.668 | 8.227  | 1.00 | 23.97 |
| ATOM | 3918 | CD1 | LEU | 516 | 73.345 | 19.858 | 8.412  | 1.00 | 24.27 |
| ATOM | 3919 | CD2 | LEU | 516 | 71.198 | 18.850 | 9.023  | 1.00 | 21.46 |
| ATOM | 3920 | C   | LEU | 516 | 71.197 | 17.265 | 4.800  | 1.00 | 33.44 |
| ATOM | 3921 | O   | LEU | 516 | 72.016 | 16.784 | 4.015  | 1.00 | 34.50 |
| ATOM | 3922 | N   | LYS | 517 | 70.082 | 17.863 | 4.400  | 1.00 | 36.36 |
| ATOM | 3924 | CA  | LYS | 517 | 69.783 | 18.048 | 2.993  | 1.00 | 34.58 |
| ATOM | 3925 | CB  | LYS | 517 | 68.281 | 18.255 | 2.784  | 1.00 | 38.96 |
| ATOM | 3926 | CG  | LYS | 517 | 67.409 | 17.155 | 3.380  | 1.00 | 44.34 |
| ATOM | 3927 | CD  | LYS | 517 | 66.128 | 16.920 | 2.572  | 1.00 | 52.11 |
| ATOM | 3928 | CE  | LYS | 517 | 65.138 | 18.083 | 2.637  | 1.00 | 58.29 |
| ATOM | 3929 | NZ  | LYS | 517 | 63.915 | 17.833 | 1.786  | 1.00 | 60.90 |
| ATOM | 3933 | C   | LYS | 517 | 70.567 | 19.304 | 2.597  | 1.00 | 33.51 |
| ATOM | 3934 | O   | LYS | 517 | 71.024 | 20.064 | 3.460  | 1.00 | 30.34 |
| ATOM | 3935 | N   | SER | 518 | 70.701 | 19.539 | 1.296  | 1.00 | 34.39 |
| ATOM | 3937 | CA  | SER | 518 | 71.444 | 20.693 | 0.788  | 1.00 | 35.84 |
| ATOM | 3938 | CB  | SER | 518 | 71.537 | 20.618 | -0.731 | 1.00 | 33.66 |
| ATOM | 3939 | OG  | SER | 518 | 70.282 | 20.258 | -1.266 | 1.00 | 38.73 |
| ATOM | 3941 | C   | SER | 518 | 70.879 | 22.045 | 1.198  | 1.00 | 36.91 |
| ATOM | 3942 | O   | SER | 518 | 71.591 | 23.050 | 1.205  | 1.00 | 37.32 |
| ATOM | 3943 | N   | ASP | 519 | 69.598 | 22.069 | 1.538  | 1.00 | 37.88 |
| ATOM | 3945 | CA  | ASP | 519 | 68.945 | 23.313 | 1.936  | 1.00 | 38.63 |
| ATOM | 3946 | CB  | ASP | 519 | 67.517 | 23.364 | 1.375  | 1.00 | 42.23 |
| ATOM | 3947 | CG  | ASP | 519 | 66.669 | 22.151 | 1.775  | 1.00 | 48.87 |
| ATOM | 3948 | OD1 | ASP | 519 | 67.070 | 21.380 | 2.681  | 1.00 | 49.21 |
| ATOM | 3949 | OD2 | ASP | 519 | 65.582 | 21.972 | 1.181  | 1.00 | 54.93 |
| ATOM | 3950 | C   | ASP | 519 | 68.916 | 23.537 | 3.443  | 1.00 | 38.06 |
| ATOM | 3951 | O   | ASP | 519 | 68.246 | 24.451 | 3.916  | 1.00 | 39.38 |
| ATOM | 3952 | N   | ALA | 520 | 69.622 | 22.692 | 4.191  | 1.00 | 36.24 |
| ATOM | 3954 | CA  | ALA | 520 | 69.631 | 22.795 | 5.648  | 1.00 | 34.69 |
| ATOM | 3955 | CB  | ALA | 520 | 70.359 | 21.613 | 6.259  | 1.00 | 35.68 |
| ATOM | 3956 | C   | ALA | 520 | 70.213 | 24.087 | 6.173  | 1.00 | 33.54 |
| ATOM | 3957 | O   | ALA | 520 | 71.039 | 24.718 | 5.522  | 1.00 | 34.83 |
| ATOM | 3958 | N   | THR | 521 | 69.815 | 24.452 | 7.384  | 1.00 | 34.45 |
| ATOM | 3960 | CA  | THR | 521 | 70.315 | 25.668 | 8.001  | 1.00 | 36.51 |
| ATOM | 3961 | CB  | THR | 521 | 69.148 | 26.592 | 8.493  | 1.00 | 39.14 |
| ATOM | 3962 | OG1 | THR | 521 | 68.529 | 26.031 | 9.659  | 1.00 | 41.61 |
| ATOM | 3964 | CG2 | THR | 521 | 68.081 | 26.750 | 7.409  | 1.00 | 40.14 |
| ATOM | 3965 | C   | THR | 521 | 71.228 | 25.303 | 9.170  | 1.00 | 36.35 |
| ATOM | 3966 | O   | THR | 521 | 71.376 | 24.125 | 9.510  | 1.00 | 32.23 |
| ATOM | 3967 | N   | GLU | 522 | 71.868 | 26.310 | 9.756  | 1.00 | 39.33 |
| ATOM | 3969 | CA  | GLU | 522 | 72.747 | 26.092 | 10.890 | 1.00 | 44.59 |
| ATOM | 3970 | CB  | GLU | 522 | 73.364 | 27.424 | 11.335 | 1.00 | 51.80 |
| ATOM | 3971 | CG  | GLU | 522 | 74.463 | 27.311 | 12.418 | 1.00 | 64.10 |
| ATOM | 3972 | CD  | GLU | 522 | 75.811 | 26.815 | 11.886 | 1.00 | 69.12 |
| ATOM | 3973 | OE1 | GLU | 522 | 76.784 | 27.605 | 11.869 | 1.00 | 69.26 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3974 | OE2 | GLU | 522 | 75.900 | 25.629 | 11.502 | 1.00 | 73.62 |
| ATOM | 3975 | C   | GLU | 522 | 71.953 | 25.447 | 12.042 | 1.00 | 44.53 |
| ATOM | 3976 | O   | GLU | 522 | 72.482 | 24.617 | 12.786 | 1.00 | 44.95 |
| ATOM | 3977 | N   | LYS | 523 | 70.679 | 25.814 | 12.167 | 1.00 | 42.99 |
| ATOM | 3979 | CA  | LYS | 523 | 69.826 | 25.264 | 13.216 | 1.00 | 42.17 |
| ATOM | 3980 | CB  | LYS | 523 | 68.519 | 26.053 | 13.329 | 1.00 | 45.99 |
| ATOM | 3981 | CG  | LYS | 523 | 67.583 | 25.582 | 14.433 | 1.00 | 48.74 |
| ATOM | 3982 | CD  | LYS | 523 | 66.296 | 25.027 | 13.832 | 1.00 | 57.24 |
| ATOM | 3983 | CE  | LYS | 523 | 65.405 | 24.383 | 14.884 | 1.00 | 60.31 |
| ATOM | 3984 | NZ  | LYS | 523 | 64.309 | 23.586 | 14.247 | 1.00 | 65.17 |
| ATOM | 3988 | C   | LYS | 523 | 69.563 | 23.793 | 12.935 | 1.00 | 39.03 |
| ATOM | 3989 | O   | LYS | 523 | 69.581 | 22.973 | 13.850 | 1.00 | 40.65 |
| ATOM | 3990 | N   | ASP | 524 | 69.331 | 23.457 | 11.672 | 1.00 | 34.91 |
| ATOM | 3992 | CA  | ASP | 524 | 69.122 | 22.068 | 11.294 | 1.00 | 33.12 |
| ATOM | 3993 | CB  | ASP | 524 | 68.876 | 21.942 | 9.790  | 1.00 | 34.84 |
| ATOM | 3994 | CG  | ASP | 524 | 67.482 | 22.352 | 9.389  | 1.00 | 36.47 |
| ATOM | 3995 | OD1 | ASP | 524 | 66.552 | 22.193 | 10.204 | 1.00 | 41.59 |
| ATOM | 3996 | OD2 | ASP | 524 | 67.307 | 22.815 | 8.248  | 1.00 | 38.19 |
| ATOM | 3997 | C   | ASP | 524 | 70.383 | 21.284 | 11.653 | 1.00 | 33.94 |
| ATOM | 3998 | O   | ASP | 524 | 70.301 | 20.154 | 12.139 | 1.00 | 37.40 |
| ATOM | 3999 | N   | LEU | 525 | 71.554 | 21.869 | 11.404 | 1.00 | 32.39 |
| ATOM | 4001 | CA  | LEU | 525 | 72.799 | 21.186 | 11.729 | 1.00 | 31.50 |
| ATOM | 4002 | CB  | LEU | 525 | 74.018 | 21.998 | 11.278 | 1.00 | 29.05 |
| ATOM | 4003 | CG  | LEU | 525 | 75.363 | 21.375 | 11.680 | 1.00 | 28.38 |
| ATOM | 4004 | CD1 | LEU | 525 | 75.521 | 19.990 | 11.065 | 1.00 | 27.27 |
| ATOM | 4005 | CD2 | LEU | 525 | 76.519 | 22.283 | 11.295 | 1.00 | 26.26 |
| ATOM | 4006 | C   | LEU | 525 | 72.848 | 20.941 | 13.231 | 1.00 | 30.27 |
| ATOM | 4007 | O   | LEU | 525 | 73.104 | 19.828 | 13.675 | 1.00 | 33.58 |
| ATOM | 4008 | N   | SER | 526 | 72.563 | 21.982 | 14.000 | 1.00 | 29.63 |
| ATOM | 4010 | CA  | SER | 526 | 72.544 | 21.914 | 15.459 | 1.00 | 30.26 |
| ATOM | 4011 | CB  | SER | 526 | 72.046 | 23.251 | 16.013 | 1.00 | 32.03 |
| ATOM | 4012 | OG  | SER | 526 | 71.923 | 23.199 | 17.417 | 1.00 | 37.02 |
| ATOM | 4014 | C   | SER | 526 | 71.640 | 20.796 | 15.980 | 1.00 | 29.72 |
| ATOM | 4015 | O   | SER | 526 | 71.924 | 20.162 | 16.998 | 1.00 | 27.54 |
| ATOM | 4016 | N   | ASP | 527 | 70.525 | 20.588 | 15.291 | 1.00 | 28.97 |
| ATOM | 4018 | CA  | ASP | 527 | 69.581 | 19.556 | 15.664 | 1.00 | 29.28 |
| ATOM | 4019 | CB  | ASP | 527 | 68.289 | 19.710 | 14.855 | 1.00 | 29.08 |
| ATOM | 4020 | CG  | ASP | 527 | 67.497 | 20.977 | 15.225 | 1.00 | 30.05 |
| ATOM | 4021 | OD1 | ASP | 527 | 67.750 | 21.597 | 16.292 | 1.00 | 24.32 |
| ATOM | 4022 | OD2 | ASP | 527 | 66.591 | 21.335 | 14.436 | 1.00 | 34.69 |
| ATOM | 4023 | C   | ASP | 527 | 70.175 | 18.164 | 15.436 | 1.00 | 30.65 |
| ATOM | 4024 | O   | ASP | 527 | 70.115 | 17.297 | 16.312 | 1.00 | 30.12 |
| ATOM | 4025 | N   | LEU | 528 | 70.769 | 17.958 | 14.265 | 1.00 | 30.50 |
| ATOM | 4027 | CA  | LEU | 528 | 71.358 | 16.669 | 13.946 | 1.00 | 29.54 |
| ATOM | 4028 | CB  | LEU | 528 | 71.850 | 16.647 | 12.487 | 1.00 | 26.03 |
| ATOM | 4029 | CG  | LEU | 528 | 72.409 | 15.320 | 11.942 | 1.00 | 24.26 |
| ATOM | 4030 | CD1 | LEU | 528 | 71.466 | 14.142 | 12.259 | 1.00 | 21.51 |
| ATOM | 4031 | CD2 | LEU | 528 | 72.644 | 15.437 | 10.450 | 1.00 | 15.05 |
| ATOM | 4032 | C   | LEU | 528 | 72.494 | 16.342 | 14.933 | 1.00 | 30.51 |
| ATOM | 4033 | O   | LEU | 528 | 72.641 | 15.192 | 15.354 | 1.00 | 29.79 |
| ATOM | 4034 | N   | ILE | 529 | 73.281 | 17.351 | 15.305 | 1.00 | 30.86 |
| ATOM | 4036 | CA  | ILE | 529 | 74.367 | 17.138 | 16.253 | 1.00 | 28.41 |

|      |      |     |     |     |        |        |        |      |       |      |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|------|
| ATOM | 4037 | CB  | ILE | 529 | 75.266 | 18.349 | 16.406 | 1.00 | 24.75 |      |
| ATOM | 4038 | CG2 | ILE | 529 | 76.355 | 18.064 | 17.432 | 1.00 | 25.51 |      |
| ATOM | 4039 | CG1 | ILE | 529 | 75.901 | 18.710 | 15.084 | 1.00 | 17.82 |      |
| ATOM | 4040 | CD1 | ILE | 529 | 76.912 | 19.806 | 15.251 | 1.00 | 18.14 |      |
| ATOM | 4041 | C   | ILE | 529 | 73.821 | 16.813 | 17.641 | 1.00 | 30.17 |      |
| ATOM | 4042 | O   | ILE | 529 | 74.286 | 15.873 | 18.285 | 1.00 | 30.11 |      |
| ATOM | 4043 | N   | SER | 530 | 72.836 | 17.574 | 18.101 | 1.00 | 30.29 |      |
| ATOM | 4045 | CA  | SER | 530 | 72.271 | 17.310 | 19.418 | 1.00 | 33.14 |      |
| ATOM | 4046 | CB  | SER | 530 | 71.158 | 18.293 | 19.735 | 1.00 | 36.09 |      |
| ATOM | 4047 | OG  | SER | 530 | 70.224 | 18.323 | 18.670 | 1.00 | 49.01 |      |
| ATOM | 4049 | C   | SER | 530 | 71.740 | 15.881 | 19.479 | 1.00 | 33.80 |      |
| ATOM | 4050 | O   | SER | 530 | 71.896 | 15.190 | 20.492 | 1.00 | 37.06 |      |
| ATOM | 4051 | N   | GLU | 531 | 71.156 | 15.413 | 18.378 | 1.00 | 30.13 |      |
| ATOM | 4053 | CA  | GLU | 531 | 70.629 | 14.065 | 18.351 | 1.00 | 29.18 |      |
| ATOM | 4054 | CB  | GLU | 531 | 69.822 | 13.801 | 17.087 | 1.00 | 32.42 |      |
| ATOM | 4055 | CG  | GLU | 531 | 69.253 | 12.394 | 17.058 | 1.00 | 33.35 |      |
| ATOM | 4056 | CD  | GLU | 531 | 68.354 | 12.131 | 15.883 | 1.00 | 34.76 |      |
| ATOM | 4057 | OE1 | GLU | 531 | 67.481 | 11.249 | 16.002 | 1.00 | 40.42 |      |
| ATOM | 4058 | OE2 | GLU | 531 | 68.516 | 12.793 | 14.847 | 1.00 | 35.88 |      |
| ATOM | 4059 | C   | GLU | 531 | 71.734 | 13.025 | 18.488 | 1.00 | 28.27 |      |
| ATOM | 4060 | O   | GLU | 531 | 71.569 | 12.032 | 19.192 | 1.00 | 26.75 |      |
| ATOM | 4061 | N   | MET | 532 | 72.842 | 13.235 | 17.786 | 1.00 | 27.80 |      |
| ATOM | 4063 | CA  | MET | 532 | 73.976 | 12.320 | 17.835 | 1.00 | 27.82 |      |
| ATOM | 4064 | CB  | MET | 532 | 75.080 | 12.813 | 16.890 | 1.00 | 29.43 |      |
| ATOM | 4065 | CG  | MET | 532 | 76.461 | 12.225 | 17.138 | 1.00 | 24.34 |      |
| ATOM | 4066 | SD  | MET | 532 | 77.641 | 12.702 | 15.840 | 1.00 | 27.83 |      |
| ATOM | 4067 | CE  | MET | 532 | 77.791 | 14.452 | 16.193 | 1.00 | 21.90 |      |
| ATOM | 4068 | C   | MET | 532 | 74.499 | 12.272 | 19.260 | 1.00 | 29.53 |      |
| ATOM | 4069 | O   | MET | 532 | 74.742 | 11.197 | 19.809 | 1.00 | 30.14 |      |
| ATOM | 4070 | N   | GLU | 533 | 74.610 | 13.445 | 19.871 | 1.00 | 30.25 |      |
| ATOM | 4072 | CA  | GLU | 533 | 75.109 | 13.570 | 21.233 | 1.00 | 31.95 |      |
| ATOM | 4073 | CB  | GLU | 533 | 75.300 | 15.039 | 21.594 | 1.00 | 32.55 |      |
| ATOM | 4074 | CG  | GLU | 533 | 76.391 | 15.724 | 20.765 | 1.00 | 35.71 |      |
| ATOM | 4075 | CD  | GLU | 533 | 77.766 | 15.087 | 20.951 | 1.00 | 36.71 |      |
| ATOM | 4076 | OE1 | GLU | 533 | 78.297 | 15.136 | 22.084 | 1.00 | 40.19 |      |
| ATOM | 4077 | OE2 | GLU | 533 | 78.322 | 14.555 | 19.969 | 1.00 | 33.99 |      |
| ATOM | 4078 | C   | GLU | 533 | 74.185 | 12.886 | 22.225 | 1.00 | 33.06 |      |
| ATOM | 4079 | O   | GLU | 533 | 74.642 | 12.197 | 23.147 | 1.00 | 33.49 |      |
| ATOM | 4080 | N   | MET | 534 | 72.883 | 13.052 | 22.025 | 1.00 | 33.12 |      |
| ATOM | 4082 | CA  | MET | 534 | 71.913 | 12.432 | 22.900 | 1.00 | 32.48 |      |
| ATOM | 4083 | CB  | MET | 534 | 70.484 | 12.859 | 22.533 | 1.00 | 30.60 |      |
| ATOM | 4084 | CG  | MET | 534 | 69.591 | 12.915 | 23.791 | 0.50 | 28.70 | PRT1 |
| ATOM | 4085 | SD  | MET | 534 | 67.787 | 12.849 | 23.608 | 0.50 | 27.55 | PRT1 |
| ATOM | 4086 | CE  | MET | 534 | 67.409 | 14.560 | 23.291 | 0.50 | 26.84 | PRT1 |
| ATOM | 4087 | C   | MET | 534 | 72.102 | 10.908 | 22.785 | 1.00 | 31.10 |      |
| ATOM | 4088 | O   | MET | 534 | 72.258 | 10.224 | 23.791 | 1.00 | 32.80 |      |
| ATOM | 4089 | N   | MET | 535 | 72.194 | 10.394 | 21.563 | 1.00 | 30.50 |      |
| ATOM | 4091 | CA  | MET | 535 | 72.399 | 8.961  | 21.368 | 1.00 | 29.25 |      |
| ATOM | 4092 | CB  | MET | 535 | 72.577 | 8.623  | 19.884 | 1.00 | 28.10 |      |
| ATOM | 4093 | CG  | MET | 535 | 71.337 | 8.876  | 19.042 | 1.00 | 27.48 |      |
| ATOM | 4094 | SD  | MET | 535 | 71.377 | 7.980  | 17.502 | 1.00 | 26.94 |      |
| ATOM | 4095 | CE  | MET | 535 | 71.346 | 9.275  | 16.310 | 1.00 | 33.72 |      |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4096 | C   | MET | 535 | 73.621 | 8.514  | 22.155 | 1.00 | 29.29 |
| ATOM | 4097 | O   | MET | 535 | 73.640 | 7.412  | 22.710 | 1.00 | 29.06 |
| ATOM | 4098 | N   | LYS | 536 | 74.644 | 9.367  | 22.185 | 1.00 | 31.75 |
| ATOM | 4100 | CA  | LYS | 536 | 75.869 | 9.073  | 22.930 | 1.00 | 33.24 |
| ATOM | 4101 | CB  | LYS | 536 | 76.950 | 10.108 | 22.628 | 1.00 | 31.29 |
| ATOM | 4102 | CG  | LYS | 536 | 77.602 | 10.007 | 21.258 | 1.00 | 31.09 |
| ATOM | 4103 | CD  | LYS | 536 | 78.570 | 11.154 | 21.103 | 1.00 | 28.76 |
| ATOM | 4104 | CE  | LYS | 536 | 79.219 | 11.220 | 19.755 | 1.00 | 26.70 |
| ATOM | 4105 | NZ  | LYS | 536 | 80.059 | 12.461 | 19.742 | 1.00 | 27.38 |
| ATOM | 4109 | C   | LYS | 536 | 75.630 | 9.014  | 24.451 | 1.00 | 35.30 |
| ATOM | 4110 | O   | LYS | 536 | 76.201 | 8.172  | 25.137 | 1.00 | 35.61 |
| ATOM | 4111 | N   | MET | 537 | 74.788 | 9.902  | 24.972 | 1.00 | 35.67 |
| ATOM | 4113 | CA  | MET | 537 | 74.517 | 9.908  | 26.408 | 1.00 | 38.27 |
| ATOM | 4114 | CB  | MET | 537 | 73.858 | 11.221 | 26.844 | 1.00 | 43.86 |
| ATOM | 4115 | CG  | MET | 537 | 74.801 | 12.420 | 26.884 | 1.00 | 55.46 |
| ATOM | 4116 | SD  | MET | 537 | 76.189 | 12.272 | 28.062 | 1.00 | 63.44 |
| ATOM | 4117 | CE  | MET | 537 | 75.383 | 12.822 | 29.591 | 1.00 | 62.14 |
| ATOM | 4118 | C   | MET | 537 | 73.657 | 8.734  | 26.845 | 1.00 | 37.10 |
| ATOM | 4119 | O   | MET | 537 | 73.855 | 8.188  | 27.920 | 1.00 | 39.26 |
| ATOM | 4120 | N   | ILE | 538 | 72.723 | 8.320  | 26.003 | 1.00 | 34.96 |
| ATOM | 4122 | CA  | ILE | 538 | 71.819 | 7.219  | 26.320 | 1.00 | 32.78 |
| ATOM | 4123 | CB  | ILE | 538 | 70.618 | 7.202  | 25.342 | 1.00 | 32.48 |
| ATOM | 4124 | CG2 | ILE | 538 | 69.782 | 5.943  | 25.537 | 1.00 | 32.27 |
| ATOM | 4125 | CG1 | ILE | 538 | 69.756 | 8.449  | 25.538 | 1.00 | 31.77 |
| ATOM | 4126 | CD1 | ILE | 538 | 68.746 | 8.651  | 24.409 | 1.00 | 34.25 |
| ATOM | 4127 | C   | ILE | 538 | 72.456 | 5.823  | 26.365 | 1.00 | 30.54 |
| ATOM | 4128 | O   | ILE | 538 | 72.146 | 5.039  | 27.250 | 1.00 | 33.37 |
| ATOM | 4129 | N   | GLY | 539 | 73.293 | 5.481  | 25.399 | 1.00 | 27.09 |
| ATOM | 4131 | CA  | GLY | 539 | 73.892 | 4.162  | 25.419 | 1.00 | 28.72 |
| ATOM | 4132 | C   | GLY | 539 | 73.173 | 3.135  | 24.552 | 1.00 | 31.16 |
| ATOM | 4133 | O   | GLY | 539 | 72.069 | 3.379  | 24.060 | 1.00 | 32.94 |
| ATOM | 4134 | N   | LYS | 540 | 73.808 | 1.981  | 24.370 | 1.00 | 31.68 |
| ATOM | 4136 | CA  | LYS | 540 | 73.264 | 0.912  | 23.537 | 1.00 | 34.64 |
| ATOM | 4137 | CB  | LYS | 540 | 74.399 | 0.032  | 23.029 | 1.00 | 33.47 |
| ATOM | 4138 | CG  | LYS | 540 | 75.331 | 0.730  | 22.095 | 1.00 | 39.67 |
| ATOM | 4139 | CD  | LYS | 540 | 76.396 | -0.209 | 21.573 | 1.00 | 41.48 |
| ATOM | 4140 | CE  | LYS | 540 | 77.228 | 0.475  | 20.501 | 1.00 | 48.72 |
| ATOM | 4141 | NZ  | LYS | 540 | 76.442 | 0.800  | 19.254 | 1.00 | 54.86 |
| ATOM | 4145 | C   | LYS | 540 | 72.206 | -0.010 | 24.143 | 1.00 | 36.68 |
| ATOM | 4146 | O   | LYS | 540 | 72.276 | -0.370 | 25.324 | 1.00 | 41.03 |
| ATOM | 4147 | N   | HIS | 541 | 71.233 | -0.396 | 23.319 | 1.00 | 35.61 |
| ATOM | 4149 | CA  | HIS | 541 | 70.190 | -1.335 | 23.711 | 1.00 | 34.24 |
| ATOM | 4150 | CB  | HIS | 541 | 69.074 | -0.702 | 24.526 | 1.00 | 33.44 |
| ATOM | 4151 | CG  | HIS | 541 | 68.118 | -1.711 | 25.083 | 1.00 | 34.60 |
| ATOM | 4152 | CD2 | HIS | 541 | 68.059 | -2.310 | 26.292 | 1.00 | 33.77 |
| ATOM | 4153 | ND1 | HIS | 541 | 67.143 | -2.316 | 24.309 | 1.00 | 34.19 |
| ATOM | 4155 | CE1 | HIS | 541 | 66.539 | -3.248 | 25.020 | 1.00 | 36.87 |
| ATOM | 4156 | NE2 | HIS | 541 | 67.074 | -3.272 | 26.228 | 1.00 | 34.05 |
| ATOM | 4158 | C   | HIS | 541 | 69.624 | -2.023 | 22.474 | 1.00 | 36.31 |
| ATOM | 4159 | O   | HIS | 541 | 69.342 | -1.378 | 21.457 | 1.00 | 38.40 |
| ATOM | 4160 | N   | LYS | 542 | 69.407 | -3.331 | 22.586 | 1.00 | 36.42 |
| ATOM | 4162 | CA  | LYS | 542 | 68.923 | -4.155 | 21.469 | 1.00 | 35.10 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4163 | CB  | LYS | 542 | 68.680 | -5.602 | 21.915 | 1.00 | 34.24 |
| ATOM | 4164 | C   | LYS | 542 | 67.674 | -3.646 | 20.802 | 1.00 | 32.40 |
| ATOM | 4165 | O   | LYS | 542 | 67.507 | -3.822 | 19.612 | 1.00 | 32.37 |
| ATOM | 4166 | N   | ASN | 543 | 66.785 | -3.046 | 21.580 | 1.00 | 32.12 |
| ATOM | 4168 | CA  | ASN | 543 | 65.541 | -2.561 | 21.015 | 1.00 | 33.01 |
| ATOM | 4169 | CB  | ASN | 543 | 64.361 | -3.081 | 21.842 | 1.00 | 34.26 |
| ATOM | 4170 | CG  | ASN | 543 | 64.365 | -4.597 | 21.979 | 1.00 | 32.20 |
| ATOM | 4171 | OD1 | ASN | 543 | 64.633 | -5.128 | 23.050 | 1.00 | 32.23 |
| ATOM | 4172 | ND2 | ASN | 543 | 64.077 | -5.292 | 20.904 | 1.00 | 30.50 |
| ATOM | 4175 | C   | ASN | 543 | 65.424 | -1.050 | 20.719 | 1.00 | 32.21 |
| ATOM | 4176 | O   | ASN | 543 | 64.326 | -0.481 | 20.765 | 1.00 | 31.13 |
| ATOM | 4177 | N   | ILE | 544 | 66.556 | -0.419 | 20.397 | 1.00 | 30.52 |
| ATOM | 4179 | CA  | ILE | 544 | 66.611 | 1.002  | 20.028 | 1.00 | 29.01 |
| ATOM | 4180 | CB  | ILE | 544 | 67.040 | 1.962  | 21.208 | 1.00 | 25.83 |
| ATOM | 4181 | CG2 | ILE | 544 | 66.244 | 1.682  | 22.467 | 1.00 | 24.46 |
| ATOM | 4182 | CG1 | ILE | 544 | 68.532 | 1.848  | 21.522 | 1.00 | 27.54 |
| ATOM | 4183 | CD1 | ILE | 544 | 69.008 | 2.839  | 22.581 | 1.00 | 22.70 |
| ATOM | 4184 | C   | ILE | 544 | 67.617 | 1.118  | 18.870 | 1.00 | 29.49 |
| ATOM | 4185 | O   | ILE | 544 | 68.410 | 0.194  | 18.633 | 1.00 | 27.26 |
| ATOM | 4186 | N   | ILE | 545 | 67.504 | 2.184  | 18.078 | 1.00 | 26.74 |
| ATOM | 4188 | CA  | ILE | 545 | 68.453 | 2.396  | 16.992 | 1.00 | 27.06 |
| ATOM | 4189 | CB  | ILE | 545 | 67.913 | 3.350  | 15.921 | 1.00 | 23.64 |
| ATOM | 4190 | CG2 | ILE | 545 | 69.027 | 3.727  | 14.955 | 1.00 | 23.96 |
| ATOM | 4191 | CG1 | ILE | 545 | 66.754 | 2.692  | 15.167 | 1.00 | 23.13 |
| ATOM | 4192 | CD1 | ILE | 545 | 67.152 | 1.481  | 14.339 | 1.00 | 20.61 |
| ATOM | 4193 | C   | ILE | 545 | 69.720 | 2.968  | 17.633 | 1.00 | 26.93 |
| ATOM | 4194 | O   | ILE | 545 | 69.719 | 4.075  | 18.160 | 1.00 | 28.63 |
| ATOM | 4195 | N   | ASN | 546 | 70.800 | 2.200  | 17.560 | 1.00 | 29.53 |
| ATOM | 4197 | CA  | ASN | 546 | 72.075 | 2.567  | 18.161 | 1.00 | 29.39 |
| ATOM | 4198 | CB  | ASN | 546 | 72.752 | 1.308  | 18.718 | 1.00 | 29.14 |
| ATOM | 4199 | CG  | ASN | 546 | 71.908 | 0.613  | 19.772 | 1.00 | 30.21 |
| ATOM | 4200 | OD1 | ASN | 546 | 71.804 | 1.088  | 20.899 | 1.00 | 30.74 |
| ATOM | 4201 | ND2 | ASN | 546 | 71.290 | -0.505 | 19.406 | 1.00 | 30.79 |
| ATOM | 4204 | C   | ASN | 546 | 73.034 | 3.303  | 17.238 | 1.00 | 30.78 |
| ATOM | 4205 | O   | ASN | 546 | 73.011 | 3.126  | 16.015 | 1.00 | 33.04 |
| ATOM | 4206 | N   | LEU | 547 | 73.866 | 4.151  | 17.837 | 1.00 | 31.07 |
| ATOM | 4208 | CA  | LEU | 547 | 74.880 | 4.904  | 17.101 | 1.00 | 31.37 |
| ATOM | 4209 | CB  | LEU | 547 | 75.284 | 6.165  | 17.875 | 1.00 | 27.32 |
| ATOM | 4210 | CG  | LEU | 547 | 76.413 | 7.032  | 17.297 | 1.00 | 24.17 |
| ATOM | 4211 | CD1 | LEU | 547 | 75.953 | 7.768  | 16.069 | 1.00 | 18.06 |
| ATOM | 4212 | CD2 | LEU | 547 | 76.864 | 8.014  | 18.348 | 1.00 | 22.50 |
| ATOM | 4213 | C   | LEU | 547 | 76.107 | 3.999  | 16.861 | 1.00 | 33.38 |
| ATOM | 4214 | O   | LEU | 547 | 76.610 | 3.343  | 17.789 | 1.00 | 33.58 |
| ATOM | 4215 | N   | LEU | 548 | 76.543 | 3.919  | 15.607 | 1.00 | 32.72 |
| ATOM | 4217 | CA  | LEU | 548 | 77.694 | 3.104  | 15.259 | 1.00 | 31.50 |
| ATOM | 4218 | CB  | LEU | 548 | 77.388 | 2.244  | 14.029 | 1.00 | 26.30 |
| ATOM | 4219 | CG  | LEU | 548 | 76.148 | 1.341  | 14.158 | 1.00 | 25.93 |
| ATOM | 4220 | CD1 | LEU | 548 | 76.034 | 0.513  | 12.906 | 1.00 | 28.37 |
| ATOM | 4221 | CD2 | LEU | 548 | 76.196 | 0.436  | 15.394 | 1.00 | 15.84 |
| ATOM | 4222 | C   | LEU | 548 | 78.941 | 3.965  | 15.030 | 1.00 | 33.69 |
| ATOM | 4223 | O   | LEU | 548 | 80.063 | 3.488  | 15.167 | 1.00 | 37.41 |
| ATOM | 4224 | N   | GLY | 549 | 78.746 | 5.229  | 14.675 | 1.00 | 34.10 |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4226 | CA  | GLY | 549 | 79.871 | 6.116  | 14.454 | 1.00 | 31.50 |
| ATOM | 4227 | C   | GLY | 549 | 79.425 | 7.429  | 13.839 | 1.00 | 31.11 |
| ATOM | 4228 | O   | GLY | 549 | 78.221 | 7.686  | 13.700 | 1.00 | 30.15 |
| ATOM | 4229 | N   | ALA | 550 | 80.388 | 8.268  | 13.474 | 1.00 | 31.02 |
| ATOM | 4231 | CA  | ALA | 550 | 80.074 | 9.540  | 12.850 | 1.00 | 29.00 |
| ATOM | 4232 | CB  | ALA | 550 | 79.537 | 10.526 | 13.899 | 1.00 | 27.87 |
| ATOM | 4233 | C   | ALA | 550 | 81.257 | 10.149 | 12.102 | 1.00 | 27.66 |
| ATOM | 4234 | O   | ALA | 550 | 82.422 | 9.942  | 12.474 | 1.00 | 25.24 |
| ATOM | 4235 | N   | CYS | 551 | 80.944 | 10.810 | 10.984 | 1.00 | 27.61 |
| ATOM | 4237 | CA  | CYS | 551 | 81.924 | 11.540 | 10.170 | 1.00 | 25.02 |
| ATOM | 4238 | CB  | CYS | 551 | 81.754 | 11.237 | 8.680  | 1.00 | 22.41 |
| ATOM | 4239 | SG  | CYS | 551 | 82.155 | 9.553  | 8.187  | 1.00 | 27.24 |
| ATOM | 4240 | C   | CYS | 551 | 81.583 | 13.009 | 10.447 | 1.00 | 24.31 |
| ATOM | 4241 | O   | CYS | 551 | 80.569 | 13.525 | 9.958  | 1.00 | 23.55 |
| ATOM | 4242 | N   | THR | 552 | 82.367 | 13.657 | 11.303 | 1.00 | 23.22 |
| ATOM | 4244 | CA  | THR | 552 | 82.110 | 15.046 | 11.664 | 1.00 | 25.73 |
| ATOM | 4245 | CB  | THR | 552 | 82.138 | 15.215 | 13.202 | 1.00 | 26.50 |
| ATOM | 4246 | OG1 | THR | 552 | 83.479 | 15.031 | 13.664 | 1.00 | 26.31 |
| ATOM | 4248 | CG2 | THR | 552 | 81.257 | 14.171 | 13.886 | 1.00 | 26.64 |
| ATOM | 4249 | C   | THR | 552 | 83.134 | 16.014 | 11.090 | 1.00 | 27.93 |
| ATOM | 4250 | O   | THR | 552 | 82.894 | 17.216 | 11.005 | 1.00 | 28.35 |
| ATOM | 4251 | N   | GLN | 553 | 84.264 | 15.473 | 10.663 | 1.00 | 30.26 |
| ATOM | 4253 | CA  | GLN | 553 | 85.355 | 16.288 | 10.153 | 1.00 | 29.27 |
| ATOM | 4254 | CB  | GLN | 553 | 86.669 | 15.768 | 10.763 | 1.00 | 29.54 |
| ATOM | 4255 | CG  | GLN | 553 | 86.653 | 15.655 | 12.288 | 1.00 | 28.00 |
| ATOM | 4256 | CD  | GLN | 553 | 86.534 | 17.007 | 12.981 | 1.00 | 26.86 |
| ATOM | 4257 | OE1 | GLN | 553 | 87.440 | 17.821 | 12.902 | 1.00 | 30.85 |
| ATOM | 4258 | NE2 | GLN | 553 | 85.421 | 17.239 | 13.676 | 1.00 | 23.89 |
| ATOM | 4261 | C   | GLN | 553 | 85.475 | 16.316 | 8.634  | 1.00 | 28.30 |
| ATOM | 4262 | O   | GLN | 553 | 85.221 | 15.313 | 7.967  | 1.00 | 31.00 |
| ATOM | 4263 | N   | ASP | 554 | 85.860 | 17.480 | 8.119  | 1.00 | 26.89 |
| ATOM | 4265 | CA  | ASP | 554 | 86.070 | 17.725 | 6.695  | 1.00 | 27.85 |
| ATOM | 4266 | CB  | ASP | 554 | 87.370 | 17.081 | 6.257  | 1.00 | 33.44 |
| ATOM | 4267 | CG  | ASP | 554 | 88.534 | 17.564 | 7.060  | 1.00 | 37.63 |
| ATOM | 4268 | OD1 | ASP | 554 | 89.038 | 18.664 | 6.763  | 1.00 | 42.66 |
| ATOM | 4269 | OD2 | ASP | 554 | 88.929 | 16.843 | 8.000  | 1.00 | 35.80 |
| ATOM | 4270 | C   | ASP | 554 | 84.976 | 17.341 | 5.715  | 1.00 | 28.04 |
| ATOM | 4271 | O   | ASP | 554 | 85.193 | 16.518 | 4.826  | 1.00 | 31.06 |
| ATOM | 4272 | N   | GLY | 555 | 83.824 | 17.981 | 5.842  | 1.00 | 28.26 |
| ATOM | 4274 | CA  | GLY | 555 | 82.720 | 17.694 | 4.949  | 1.00 | 25.89 |
| ATOM | 4275 | C   | GLY | 555 | 81.438 | 17.567 | 5.734  | 1.00 | 23.07 |
| ATOM | 4276 | O   | GLY | 555 | 81.423 | 17.795 | 6.941  | 1.00 | 20.20 |
| ATOM | 4277 | N   | PRO | 556 | 80.338 | 17.185 | 5.076  | 1.00 | 22.81 |
| ATOM | 4278 | CD  | PRO | 556 | 80.280 | 16.750 | 3.679  | 1.00 | 22.33 |
| ATOM | 4279 | CA  | PRO | 556 | 79.039 | 17.032 | 5.733  | 1.00 | 23.99 |
| ATOM | 4280 | CB  | PRO | 556 | 78.154 | 16.499 | 4.612  | 1.00 | 22.41 |
| ATOM | 4281 | CG  | PRO | 556 | 79.144 | 15.801 | 3.698  | 1.00 | 24.36 |
| ATOM | 4282 | C   | PRO | 556 | 79.080 | 16.066 | 6.911  | 1.00 | 26.98 |
| ATOM | 4283 | O   | PRO | 556 | 79.854 | 15.111 | 6.934  | 1.00 | 28.57 |
| ATOM | 4284 | N   | LEU | 557 | 78.237 | 16.325 | 7.896  | 1.00 | 29.25 |
| ATOM | 4286 | CA  | LEU | 557 | 78.168 | 15.471 | 9.070  | 1.00 | 30.83 |
| ATOM | 4287 | CB  | LEU | 557 | 77.550 | 16.225 | 10.251 | 1.00 | 33.20 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4288 | CG  | LEU | 557 | 77.109 | 15.416 | 11.475 | 1.00 | 30.01 |
| ATOM | 4289 | CD1 | LEU | 557 | 78.304 | 14.793 | 12.174 | 1.00 | 29.05 |
| ATOM | 4290 | CD2 | LEU | 557 | 76.365 | 16.341 | 12.407 | 1.00 | 29.20 |
| ATOM | 4291 | C   | LEU | 557 | 77.324 | 14.238 | 8.780  | 1.00 | 30.33 |
| ATOM | 4292 | O   | LEU | 557 | 76.175 | 14.343 | 8.330  | 1.00 | 27.66 |
| ATOM | 4293 | N   | TYR | 558 | 77.913 | 13.071 | 9.002  | 1.00 | 30.68 |
| ATOM | 4295 | CA  | TYR | 558 | 77.214 | 11.823 | 8.812  | 1.00 | 29.26 |
| ATOM | 4296 | CB  | TYR | 558 | 77.978 | 10.933 | 7.840  | 1.00 | 30.99 |
| ATOM | 4297 | CG  | TYR | 558 | 78.066 | 11.481 | 6.430  | 1.00 | 35.01 |
| ATOM | 4298 | CD1 | TYR | 558 | 79.108 | 11.109 | 5.592  | 1.00 | 36.17 |
| ATOM | 4299 | CE1 | TYR | 558 | 79.198 | 11.600 | 4.296  | 1.00 | 41.40 |
| ATOM | 4300 | CD2 | TYR | 558 | 77.109 | 12.368 | 5.941  | 1.00 | 36.44 |
| ATOM | 4301 | CE2 | TYR | 558 | 77.188 | 12.871 | 4.648  | 1.00 | 40.96 |
| ATOM | 4302 | CZ  | TYR | 558 | 78.237 | 12.484 | 3.825  | 1.00 | 43.59 |
| ATOM | 4303 | OH  | TYR | 558 | 78.298 | 12.965 | 2.525  | 1.00 | 42.91 |
| ATOM | 4305 | C   | TYR | 558 | 77.081 | 11.125 | 10.164 | 1.00 | 28.18 |
| ATOM | 4306 | O   | TYR | 558 | 78.077 | 10.855 | 10.835 | 1.00 | 28.06 |
| ATOM | 4307 | N   | VAL | 559 | 75.842 | 10.879 | 10.574 | 1.00 | 26.72 |
| ATOM | 4309 | CA  | VAL | 559 | 75.548 | 10.175 | 11.821 | 1.00 | 26.72 |
| ATOM | 4310 | CB  | VAL | 559 | 74.326 | 10.813 | 12.552 | 1.00 | 28.03 |
| ATOM | 4311 | CG1 | VAL | 559 | 73.915 | 9.992  | 13.771 | 1.00 | 29.85 |
| ATOM | 4312 | CG2 | VAL | 559 | 74.655 | 12.236 | 12.982 | 1.00 | 29.37 |
| ATOM | 4313 | C   | VAL | 559 | 75.238 | 8.723  | 11.443 | 1.00 | 25.58 |
| ATOM | 4314 | O   | VAL | 559 | 74.131 | 8.402  | 10.988 | 1.00 | 25.73 |
| ATOM | 4315 | N   | ILE | 560 | 76.214 | 7.851  | 11.642 | 1.00 | 24.35 |
| ATOM | 4317 | CA  | ILE | 560 | 76.061 | 6.448  | 11.281 | 1.00 | 26.64 |
| ATOM | 4318 | CB  | ILE | 560 | 77.441 | 5.781  | 11.002 | 1.00 | 26.53 |
| ATOM | 4319 | CG2 | ILE | 560 | 77.252 | 4.359  | 10.465 | 1.00 | 27.80 |
| ATOM | 4320 | CG1 | ILE | 560 | 78.254 | 6.620  | 10.004 | 1.00 | 24.69 |
| ATOM | 4321 | CD1 | ILE | 560 | 79.671 | 6.112  | 9.763  | 1.00 | 17.05 |
| ATOM | 4322 | C   | ILE | 560 | 75.312 | 5.633  | 12.339 | 1.00 | 27.95 |
| ATOM | 4323 | O   | ILE | 560 | 75.777 | 5.493  | 13.479 | 1.00 | 25.16 |
| ATOM | 4324 | N   | VAL | 561 | 74.163 | 5.084  | 11.951 | 1.00 | 27.43 |
| ATOM | 4326 | CA  | VAL | 561 | 73.352 | 4.265  | 12.947 | 1.00 | 27.69 |
| ATOM | 4327 | CB  | VAL | 561 | 72.048 | 5.000  | 13.251 | 1.00 | 25.08 |
| ATOM | 4328 | CG1 | VAL | 561 | 72.367 | 6.302  | 13.936 | 1.00 | 19.97 |
| ATOM | 4329 | CG2 | VAL | 561 | 71.186 | 5.250  | 12.033 | 1.00 | 25.55 |
| ATOM | 4330 | C   | VAL | 561 | 73.031 | 2.896  | 12.202 | 1.00 | 30.21 |
| ATOM | 4331 | O   | VAL | 561 | 73.404 | 2.623  | 11.045 | 1.00 | 32.04 |
| ATOM | 4332 | N   | GLU | 562 | 72.306 | 2.062  | 12.944 | 1.00 | 28.88 |
| ATOM | 4334 | CA  | GLU | 562 | 71.940 | 0.714  | 12.509 | 1.00 | 27.69 |
| ATOM | 4335 | CB  | GLU | 562 | 71.448 | -0.081 | 13.712 | 1.00 | 26.79 |
| ATOM | 4336 | CG  | GLU | 562 | 72.387 | 0.001  | 14.873 | 1.00 | 28.13 |
| ATOM | 4337 | CD  | GLU | 562 | 72.012 | -0.916 | 16.003 | 1.00 | 31.86 |
| ATOM | 4338 | OE1 | GLU | 562 | 72.772 | -1.876 | 16.255 | 1.00 | 33.17 |
| ATOM | 4339 | OE2 | GLU | 562 | 70.974 | -0.654 | 16.639 | 1.00 | 35.50 |
| ATOM | 4340 | C   | GLU | 562 | 70.898 | 0.636  | 11.405 | 1.00 | 27.34 |
| ATOM | 4341 | O   | GLU | 562 | 69.990 | 1.453  | 11.358 | 1.00 | 29.72 |
| ATOM | 4342 | N   | TYR | 563 | 71.002 | -0.392 | 10.568 | 1.00 | 28.07 |
| ATOM | 4344 | CA  | TYR | 563 | 70.080 | -0.626 | 9.455  | 1.00 | 32.50 |
| ATOM | 4345 | CB  | TYR | 563 | 70.848 | -1.236 | 8.269  | 1.00 | 28.32 |
| ATOM | 4346 | CG  | TYR | 563 | 70.042 | -1.427 | 7.007  | 1.00 | 26.56 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4347 | CD1 | TYR | 563 | 69.338 | -0.378  | 6.448  | 1.00 | 30.49 |
| ATOM | 4348 | CE1 | TYR | 563 | 68.620 | -0.536  | 5.258  | 1.00 | 32.83 |
| ATOM | 4349 | CD2 | TYR | 563 | 70.011 | -2.652  | 6.350  | 1.00 | 29.07 |
| ATOM | 4350 | CE2 | TYR | 563 | 69.300 | -2.821  | 5.151  | 1.00 | 30.70 |
| ATOM | 4351 | CZ  | TYR | 563 | 68.605 | -1.755  | 4.619  | 1.00 | 33.54 |
| ATOM | 4352 | OH  | TYR | 563 | 67.876 | -1.919  | 3.460  | 1.00 | 40.20 |
| ATOM | 4354 | C   | TYR | 563 | 68.930 | -1.564  | 9.878  | 1.00 | 36.30 |
| ATOM | 4355 | O   | TYR | 563 | 69.151 | -2.569  | 10.562 | 1.00 | 36.17 |
| ATOM | 4356 | N   | ALA | 564 | 67.711 | -1.234  | 9.454  | 1.00 | 39.60 |
| ATOM | 4358 | CA  | ALA | 564 | 66.529 | -2.025  | 9.750  | 1.00 | 38.93 |
| ATOM | 4359 | CB  | ALA | 564 | 65.557 | -1.207  | 10.570 | 1.00 | 40.23 |
| ATOM | 4360 | C   | ALA | 564 | 65.919 | -2.360  | 8.394  | 1.00 | 41.61 |
| ATOM | 4361 | O   | ALA | 564 | 64.958 | -1.736  | 7.977  | 1.00 | 45.88 |
| ATOM | 4362 | N   | SER | 565 | 66.455 | -3.387  | 7.745  | 1.00 | 41.15 |
| ATOM | 4364 | CA  | SER | 565 | 66.018 | -3.806  | 6.421  | 1.00 | 40.40 |
| ATOM | 4365 | CB  | SER | 565 | 66.673 | -5.134  | 6.070  | 1.00 | 40.15 |
| ATOM | 4366 | OG  | SER | 565 | 66.646 | -6.012  | 7.175  | 1.00 | 33.93 |
| ATOM | 4368 | C   | SER | 565 | 64.530 | -3.932  | 6.164  | 1.00 | 40.31 |
| ATOM | 4369 | O   | SER | 565 | 64.097 | -3.823  | 5.025  | 1.00 | 45.43 |
| ATOM | 4370 | N   | LYS | 566 | 63.743 | -4.193  | 7.197  | 1.00 | 39.63 |
| ATOM | 4372 | CA  | LYS | 566 | 62.312 | -4.341  | 6.992  | 1.00 | 36.01 |
| ATOM | 4373 | CB  | LYS | 566 | 61.807 | -5.541  | 7.783  | 1.00 | 38.35 |
| ATOM | 4374 | CG  | LYS | 566 | 62.468 | -6.928  | 7.308  | 1.00 | 38.21 |
| ATOM | 4375 | CD  | LYS | 566 | 62.161 | -8.004  | 8.208  | 1.00 | 38.79 |
| ATOM | 4376 | CE  | LYS | 566 | 62.734 | -9.277  | 7.621  | 1.00 | 38.76 |
| ATOM | 4377 | NZ  | LYS | 566 | 62.692 | -10.400 | 8.598  | 1.00 | 42.40 |
| ATOM | 4381 | C   | LYS | 566 | 61.488 | -3.079  | 7.249  | 1.00 | 37.28 |
| ATOM | 4382 | O   | LYS | 566 | 60.265 | -3.132  | 7.415  | 1.00 | 39.48 |
| ATOM | 4383 | N   | GLY | 567 | 62.166 | -1.936  | 7.237  | 1.00 | 34.31 |
| ATOM | 4385 | CA  | GLY | 567 | 61.497 | -0.666  | 7.428  | 1.00 | 32.82 |
| ATOM | 4386 | C   | GLY | 567 | 60.810 | -0.473  | 8.761  | 1.00 | 31.33 |
| ATOM | 4387 | O   | GLY | 567 | 61.251 | -1.012  | 9.778  | 1.00 | 29.23 |
| ATOM | 4388 | N   | ASN | 568 | 59.722 | 0.294   | 8.754  | 1.00 | 29.92 |
| ATOM | 4390 | CA  | ASN | 568 | 58.999 | 0.569   | 9.974  | 1.00 | 31.05 |
| ATOM | 4391 | CB  | ASN | 568 | 58.414 | 1.991   | 9.991  | 1.00 | 31.23 |
| ATOM | 4392 | CG  | ASN | 568 | 57.201 | 2.157   | 9.087  | 1.00 | 34.16 |
| ATOM | 4393 | OD1 | ASN | 568 | 56.095 | 1.685   | 9.385  | 1.00 | 37.22 |
| ATOM | 4394 | ND2 | ASN | 568 | 57.394 | 2.877   | 7.999  | 1.00 | 35.13 |
| ATOM | 4397 | C   | ASN | 568 | 57.950 | -0.486  | 10.235 | 1.00 | 31.60 |
| ATOM | 4398 | O   | ASN | 568 | 57.535 | -1.205  | 9.324  | 1.00 | 31.76 |
| ATOM | 4399 | N   | LEU | 569 | 57.517 | -0.548  | 11.490 | 1.00 | 34.63 |
| ATOM | 4401 | CA  | LEU | 569 | 56.540 | -1.511  | 11.979 | 1.00 | 35.49 |
| ATOM | 4402 | CB  | LEU | 569 | 56.456 | -1.408  | 13.500 | 1.00 | 36.13 |
| ATOM | 4403 | CG  | LEU | 569 | 55.509 | -2.363  | 14.210 | 1.00 | 34.78 |
| ATOM | 4404 | CD1 | LEU | 569 | 56.010 | -3.804  | 14.034 | 1.00 | 35.01 |
| ATOM | 4405 | CD2 | LEU | 569 | 55.425 | -1.971  | 15.664 | 1.00 | 31.13 |
| ATOM | 4406 | C   | LEU | 569 | 55.141 | -1.420  | 11.382 | 1.00 | 37.34 |
| ATOM | 4407 | O   | LEU | 569 | 54.518 | -2.447  | 11.141 | 1.00 | 41.49 |
| ATOM | 4408 | N   | ARG | 570 | 54.636 | -0.213  | 11.162 | 1.00 | 37.19 |
| ATOM | 4410 | CA  | ARG | 570 | 53.299 | -0.063  | 10.591 | 1.00 | 39.79 |
| ATOM | 4411 | CB  | ARG | 570 | 52.979 | 1.403   | 10.331 | 1.00 | 39.48 |
| ATOM | 4412 | CG  | ARG | 570 | 51.558 | 1.638   | 9.887  | 1.00 | 41.93 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4413 | CD  | ARG | 570 | 51.459 | 2.966  | 9.182  | 1.00 | 49.89 |
| ATOM | 4414 | NE  | ARG | 570 | 52.329 | 2.991  | 8.009  | 1.00 | 55.25 |
| ATOM | 4416 | CZ  | ARG | 570 | 53.121 | 4.008  | 7.693  | 1.00 | 57.90 |
| ATOM | 4417 | NH1 | ARG | 570 | 53.145 | 5.093  | 8.455  | 1.00 | 56.93 |
| ATOM | 4420 | NH2 | ARG | 570 | 53.921 | 3.920  | 6.637  | 1.00 | 57.58 |
| ATOM | 4423 | C   | ARG | 570 | 53.219 | -0.835 | 9.278  | 1.00 | 39.84 |
| ATOM | 4424 | O   | ARG | 570 | 52.309 | -1.644 | 9.060  | 1.00 | 42.48 |
| ATOM | 4425 | N   | GLU | 571 | 54.208 | -0.597 | 8.425  | 1.00 | 38.22 |
| ATOM | 4427 | CA  | GLU | 571 | 54.292 | -1.251 | 7.135  | 1.00 | 38.84 |
| ATOM | 4428 | CB  | GLU | 571 | 55.284 | -0.492 | 6.266  | 1.00 | 40.72 |
| ATOM | 4429 | CG  | GLU | 571 | 54.818 | 0.941  | 5.999  | 1.00 | 49.17 |
| ATOM | 4430 | CD  | GLU | 571 | 55.845 | 1.798  | 5.284  | 1.00 | 58.95 |
| ATOM | 4431 | OE1 | GLU | 571 | 57.047 | 1.434  | 5.278  | 1.00 | 67.07 |
| ATOM | 4432 | OE2 | GLU | 571 | 55.455 | 2.954  | 4.736  | 1.00 | 61.02 |
| ATOM | 4433 | C   | GLU | 571 | 54.617 | -2.744 | 7.240  | 1.00 | 37.79 |
| ATOM | 4434 | O   | GLU | 571 | 54.075 | -3.558 | 6.488  | 1.00 | 37.63 |
| ATOM | 4435 | N   | TYR | 572 | 55.462 | -3.104 | 8.204  | 1.00 | 36.89 |
| ATOM | 4437 | CA  | TYR | 572 | 55.841 | -4.498 | 8.437  | 1.00 | 36.81 |
| ATOM | 4438 | CB  | TYR | 572 | 56.822 | -4.584 | 9.612  | 1.00 | 33.24 |
| ATOM | 4439 | CG  | TYR | 572 | 57.191 | -5.987 | 10.080 | 1.00 | 33.42 |
| ATOM | 4440 | CD1 | TYR | 572 | 58.209 | -6.714 | 9.450  | 1.00 | 31.93 |
| ATOM | 4441 | CE1 | TYR | 572 | 58.623 | -7.960 | 9.936  | 1.00 | 30.14 |
| ATOM | 4442 | CD2 | TYR | 572 | 56.586 | -6.552 | 11.208 | 1.00 | 34.42 |
| ATOM | 4443 | CE2 | TYR | 572 | 56.991 | -7.799 | 11.704 | 1.00 | 32.29 |
| ATOM | 4444 | CZ  | TYR | 572 | 58.012 | -8.495 | 11.065 | 1.00 | 32.52 |
| ATOM | 4445 | OH  | TYR | 572 | 58.427 | -9.717 | 11.571 | 1.00 | 31.70 |
| ATOM | 4447 | C   | TYR | 572 | 54.588 | -5.310 | 8.754  | 1.00 | 37.64 |
| ATOM | 4448 | O   | TYR | 572 | 54.387 | -6.410 | 8.226  | 1.00 | 35.70 |
| ATOM | 4449 | N   | LEU | 573 | 53.742 | -4.740 | 9.608  | 1.00 | 38.63 |
| ATOM | 4451 | CA  | LEU | 573 | 52.498 | -5.376 | 10.011 | 1.00 | 38.21 |
| ATOM | 4452 | CB  | LEU | 573 | 51.802 | -4.532 | 11.067 | 1.00 | 35.40 |
| ATOM | 4453 | CG  | LEU | 573 | 52.494 | -4.421 | 12.419 | 1.00 | 34.55 |
| ATOM | 4454 | CD1 | LEU | 573 | 51.755 | -3.402 | 13.258 | 1.00 | 32.02 |
| ATOM | 4455 | CD2 | LEU | 573 | 52.537 | -5.788 | 13.108 | 1.00 | 34.58 |
| ATOM | 4456 | C   | LEU | 573 | 51.570 | -5.549 | 8.818  | 1.00 | 38.11 |
| ATOM | 4457 | O   | LEU | 573 | 51.144 | -6.656 | 8.507  | 1.00 | 37.68 |
| ATOM | 4458 | N   | GLN | 574 | 51.286 | -4.448 | 8.138  | 1.00 | 40.92 |
| ATOM | 4460 | CA  | GLN | 574 | 50.402 | -4.476 | 6.982  | 1.00 | 45.16 |
| ATOM | 4461 | CB  | GLN | 574 | 50.213 | -3.071 | 6.447  | 1.00 | 44.16 |
| ATOM | 4462 | CG  | GLN | 574 | 49.380 | -2.239 | 7.369  | 1.00 | 45.26 |
| ATOM | 4463 | CD  | GLN | 574 | 49.222 | -0.849 | 6.863  | 1.00 | 47.09 |
| ATOM | 4464 | OE1 | GLN | 574 | 49.789 | -0.483 | 5.838  | 1.00 | 50.83 |
| ATOM | 4465 | NE2 | GLN | 574 | 48.450 | -0.051 | 7.573  | 1.00 | 48.95 |
| ATOM | 4468 | C   | GLN | 574 | 50.807 | -5.419 | 5.861  | 1.00 | 45.21 |
| ATOM | 4469 | O   | GLN | 574 | 49.951 | -6.031 | 5.215  | 1.00 | 49.63 |
| ATOM | 4470 | N   | ALA | 575 | 52.105 | -5.562 | 5.646  | 1.00 | 43.35 |
| ATOM | 4472 | CA  | ALA | 575 | 52.579 | -6.446 | 4.604  | 1.00 | 42.62 |
| ATOM | 4473 | CB  | ALA | 575 | 54.023 | -6.130 | 4.284  | 1.00 | 43.49 |
| ATOM | 4474 | C   | ALA | 575 | 52.439 | -7.906 | 5.022  | 1.00 | 42.85 |
| ATOM | 4475 | O   | ALA | 575 | 52.771 | -8.804 | 4.254  | 1.00 | 44.43 |
| ATOM | 4476 | N   | ARG | 576 | 51.937 | -8.142 | 6.229  | 1.00 | 42.24 |
| ATOM | 4478 | CA  | ARG | 576 | 51.787 | -9.494 | 6.747  | 1.00 | 41.58 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4479 | CB  | ARG | 576 | 52.813 | -9.725  | 7.849  | 1.00 | 40.10 |
| ATOM | 4480 | CG  | ARG | 576 | 54.225 | -9.694  | 7.314  | 1.00 | 40.58 |
| ATOM | 4481 | CD  | ARG | 576 | 55.280 | -9.604  | 8.392  | 1.00 | 42.40 |
| ATOM | 4482 | NE  | ARG | 576 | 56.632 | -9.607  | 7.826  | 1.00 | 41.95 |
| ATOM | 4484 | CZ  | ARG | 576 | 57.110 | -8.684  | 6.992  | 1.00 | 38.22 |
| ATOM | 4485 | NH1 | ARG | 576 | 56.359 | -7.658  | 6.612  | 1.00 | 38.61 |
| ATOM | 4488 | NH2 | ARG | 576 | 58.347 | -8.787  | 6.541  | 1.00 | 34.50 |
| ATOM | 4491 | C   | ARG | 576 | 50.389 | -9.762  | 7.255  | 1.00 | 43.28 |
| ATOM | 4492 | O   | ARG | 576 | 50.187 | -10.607 | 8.137  | 1.00 | 43.76 |
| ATOM | 4493 | N   | ARG | 577 | 49.418 | -9.057  | 6.684  | 1.00 | 44.65 |
| ATOM | 4495 | CA  | ARG | 577 | 48.023 | -9.222  | 7.077  | 1.00 | 46.69 |
| ATOM | 4496 | CB  | ARG | 577 | 47.197 | -8.032  | 6.587  | 1.00 | 45.24 |
| ATOM | 4497 | CG  | ARG | 577 | 47.372 | -6.793  | 7.440  | 1.00 | 42.93 |
| ATOM | 4498 | CD  | ARG | 577 | 46.572 | -5.635  | 6.898  | 1.00 | 44.63 |
| ATOM | 4499 | NE  | ARG | 577 | 46.428 | -4.577  | 7.895  | 1.00 | 47.76 |
| ATOM | 4501 | CZ  | ARG | 577 | 45.750 | -3.450  | 7.704  | 1.00 | 48.55 |
| ATOM | 4502 | NH1 | ARG | 577 | 45.149 | -3.225  | 6.548  | 1.00 | 50.64 |
| ATOM | 4505 | NH2 | ARG | 577 | 45.643 | -2.560  | 8.684  | 1.00 | 50.77 |
| ATOM | 4508 | C   | ARG | 577 | 47.408 | -10.540 | 6.603  | 1.00 | 47.12 |
| ATOM | 4509 | O   | ARG | 577 | 47.396 | -10.840 | 5.406  | 1.00 | 48.37 |
| ATOM | 4510 | N   | GLN | 594 | 53.246 | -13.595 | 7.891  | 1.00 | 64.66 |
| ATOM | 4512 | CA  | GLN | 594 | 52.054 | -13.835 | 8.728  | 1.00 | 65.10 |
| ATOM | 4513 | CB  | GLN | 594 | 51.130 | -14.931 | 8.184  | 1.00 | 65.77 |
| ATOM | 4514 | C   | GLN | 594 | 52.447 | -14.127 | 10.174 | 1.00 | 64.01 |
| ATOM | 4515 | O   | GLN | 594 | 52.962 | -15.201 | 10.507 | 1.00 | 64.42 |
| ATOM | 4516 | N   | LEU | 595 | 52.189 | -13.154 | 11.031 | 1.00 | 61.45 |
| ATOM | 4518 | CA  | LEU | 595 | 52.524 | -13.245 | 12.437 | 1.00 | 59.21 |
| ATOM | 4519 | CB  | LEU | 595 | 52.669 | -11.826 | 12.979 | 1.00 | 57.54 |
| ATOM | 4520 | CG  | LEU | 595 | 53.648 | -11.042 | 12.099 | 1.00 | 56.37 |
| ATOM | 4521 | CD1 | LEU | 595 | 53.442 | -9.551  | 12.202 | 1.00 | 57.06 |
| ATOM | 4522 | CD2 | LEU | 595 | 55.064 | -11.430 | 12.465 | 1.00 | 55.57 |
| ATOM | 4523 | C   | LEU | 595 | 51.509 | -14.046 | 13.257 | 1.00 | 58.34 |
| ATOM | 4524 | O   | LEU | 595 | 50.316 | -14.039 | 12.953 | 1.00 | 58.21 |
| ATOM | 4525 | N   | SER | 596 | 52.007 | -14.740 | 14.280 | 1.00 | 58.00 |
| ATOM | 4527 | CA  | SER | 596 | 51.182 | -15.543 | 15.180 | 1.00 | 56.04 |
| ATOM | 4528 | CB  | SER | 596 | 51.960 | -16.770 | 15.667 | 1.00 | 57.98 |
| ATOM | 4529 | OG  | SER | 596 | 52.987 | -16.403 | 16.580 | 1.00 | 58.94 |
| ATOM | 4531 | C   | SER | 596 | 50.854 | -14.681 | 16.383 | 1.00 | 54.65 |
| ATOM | 4532 | O   | SER | 596 | 51.479 | -13.645 | 16.584 | 1.00 | 52.05 |
| ATOM | 4533 | N   | SER | 597 | 49.914 | -15.133 | 17.208 | 1.00 | 56.10 |
| ATOM | 4535 | CA  | SER | 597 | 49.525 | -14.389 | 18.398 | 1.00 | 57.51 |
| ATOM | 4536 | CB  | SER | 597 | 48.530 | -15.196 | 19.236 | 1.00 | 58.60 |
| ATOM | 4537 | OG  | SER | 597 | 47.620 | -15.914 | 18.421 | 1.00 | 61.95 |
| ATOM | 4539 | C   | SER | 597 | 50.778 | -14.094 | 19.220 | 1.00 | 57.75 |
| ATOM | 4540 | O   | SER | 597 | 50.934 | -12.998 | 19.755 | 1.00 | 57.86 |
| ATOM | 4541 | N   | LYS | 598 | 51.692 | -15.062 | 19.271 | 1.00 | 57.88 |
| ATOM | 4543 | CA  | LYS | 598 | 52.930 | -14.905 | 20.026 | 1.00 | 57.51 |
| ATOM | 4544 | CB  | LYS | 598 | 53.690 | -16.231 | 20.124 | 1.00 | 57.72 |
| ATOM | 4545 | CG  | LYS | 598 | 54.470 | -16.395 | 21.432 | 1.00 | 60.14 |
| ATOM | 4546 | CD  | LYS | 598 | 55.227 | -17.724 | 21.479 | 1.00 | 62.23 |
| ATOM | 4547 | CE  | LYS | 598 | 55.894 | -17.989 | 22.834 | 1.00 | 60.79 |
| ATOM | 4548 | NZ  | LYS | 598 | 54.921 | -18.149 | 23.949 | 1.00 | 61.46 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4552 | C   | LYS | 598 | 53.809 | -13.829 | 19.389 | 1.00 | 55.94 |
| ATOM | 4553 | O   | LYS | 598 | 54.322 | -12.955 | 20.089 | 1.00 | 55.84 |
| ATOM | 4554 | N   | ASP | 599 | 53.935 | -13.866 | 18.061 | 1.00 | 53.32 |
| ATOM | 4556 | CA  | ASP | 599 | 54.737 | -12.882 | 17.334 | 1.00 | 50.30 |
| ATOM | 4557 | CB  | ASP | 599 | 54.688 | -13.119 | 15.823 | 1.00 | 49.72 |
| ATOM | 4558 | CG  | ASP | 599 | 55.426 | -14.383 | 15.394 | 1.00 | 53.97 |
| ATOM | 4559 | OD1 | ASP | 599 | 56.176 | -14.948 | 16.214 | 1.00 | 58.12 |
| ATOM | 4560 | OD2 | ASP | 599 | 55.261 | -14.822 | 14.233 | 1.00 | 55.58 |
| ATOM | 4561 | C   | ASP | 599 | 54.247 | -11.474 | 17.636 | 1.00 | 49.53 |
| ATOM | 4562 | O   | ASP | 599 | 55.054 | -10.589 | 17.911 | 1.00 | 51.16 |
| ATOM | 4563 | N   | LEU | 600 | 52.930 | -11.281 | 17.634 | 1.00 | 47.50 |
| ATOM | 4565 | CA  | LEU | 600 | 52.354 | -9.972  | 17.909 | 1.00 | 45.41 |
| ATOM | 4566 | CB  | LEU | 600 | 50.850 | -9.948  | 17.627 | 1.00 | 43.77 |
| ATOM | 4567 | CG  | LEU | 600 | 50.429 | -10.121 | 16.169 | 1.00 | 41.05 |
| ATOM | 4568 | CD1 | LEU | 600 | 48.941 | -9.904  | 16.048 | 1.00 | 41.04 |
| ATOM | 4569 | CD2 | LEU | 600 | 51.160 | -9.140  | 15.294 | 1.00 | 39.59 |
| ATOM | 4570 | C   | LEU | 600 | 52.638 | -9.485  | 19.318 | 1.00 | 46.77 |
| ATOM | 4571 | O   | LEU | 600 | 52.964 | -8.308  | 19.497 | 1.00 | 48.74 |
| ATOM | 4572 | N   | VAL | 601 | 52.524 | -10.372 | 20.314 | 1.00 | 47.64 |
| ATOM | 4574 | CA  | VAL | 601 | 52.804 | -10.002 | 21.716 | 1.00 | 47.38 |
| ATOM | 4575 | CB  | VAL | 601 | 52.321 | -11.070 | 22.756 | 1.00 | 46.58 |
| ATOM | 4576 | CG1 | VAL | 601 | 52.081 | -10.403 | 24.114 | 1.00 | 45.07 |
| ATOM | 4577 | CG2 | VAL | 601 | 51.058 | -11.759 | 22.306 | 1.00 | 48.86 |
| ATOM | 4578 | C   | VAL | 601 | 54.321 | -9.811  | 21.890 | 1.00 | 46.04 |
| ATOM | 4579 | O   | VAL | 601 | 54.783 | -8.935  | 22.622 | 1.00 | 46.13 |
| ATOM | 4580 | N   | SER | 602 | 55.090 | -10.624 | 21.183 | 1.00 | 44.21 |
| ATOM | 4582 | CA  | SER | 602 | 56.534 | -10.546 | 21.233 | 1.00 | 42.78 |
| ATOM | 4583 | CB  | SER | 602 | 57.119 | -11.594 | 20.297 | 1.00 | 43.98 |
| ATOM | 4584 | OG  | SER | 602 | 58.523 | -11.615 | 20.355 | 1.00 | 51.02 |
| ATOM | 4586 | C   | SER | 602 | 56.954 | -9.135  | 20.813 | 1.00 | 41.74 |
| ATOM | 4587 | O   | SER | 602 | 57.709 | -8.467  | 21.524 | 1.00 | 44.09 |
| ATOM | 4588 | N   | CYS | 603 | 56.425 | -8.667  | 19.685 | 1.00 | 39.57 |
| ATOM | 4590 | CA  | CYS | 603 | 56.699 | -7.317  | 19.177 | 1.00 | 36.11 |
| ATOM | 4591 | CB  | CYS | 603 | 55.852 | -7.058  | 17.924 | 1.00 | 34.72 |
| ATOM | 4592 | SG  | CYS | 603 | 55.760 | -5.364  | 17.323 | 0.50 | 29.10 |
| ATOM | 4593 | C   | CYS | 603 | 56.378 | -6.272  | 20.252 | 1.00 | 34.50 |
| ATOM | 4594 | O   | CYS | 603 | 57.174 | -5.371  | 20.506 | 1.00 | 33.61 |
| ATOM | 4595 | N   | ALA | 604 | 55.236 | -6.429  | 20.913 | 1.00 | 34.64 |
| ATOM | 4597 | CA  | ALA | 604 | 54.811 | -5.506  | 21.964 | 1.00 | 37.18 |
| ATOM | 4598 | CB  | ALA | 604 | 53.386 | -5.850  | 22.414 | 1.00 | 38.20 |
| ATOM | 4599 | C   | ALA | 604 | 55.786 | -5.516  | 23.160 | 1.00 | 38.91 |
| ATOM | 4600 | O   | ALA | 604 | 56.026 | -4.481  | 23.790 | 1.00 | 38.29 |
| ATOM | 4601 | N   | TYR | 605 | 56.323 | -6.693  | 23.477 | 1.00 | 39.54 |
| ATOM | 4603 | CA  | TYR | 605 | 57.283 | -6.854  | 24.565 | 1.00 | 39.29 |
| ATOM | 4604 | CB  | TYR | 605 | 57.573 | -8.340  | 24.791 | 1.00 | 40.07 |
| ATOM | 4605 | CG  | TYR | 605 | 58.663 | -8.622  | 25.807 | 1.00 | 39.09 |
| ATOM | 4606 | CD1 | TYR | 605 | 58.525 | -8.236  | 27.137 | 1.00 | 38.50 |
| ATOM | 4607 | CE1 | TYR | 605 | 59.526 | -8.505  | 28.074 | 1.00 | 40.76 |
| ATOM | 4608 | CD2 | TYR | 605 | 59.831 | -9.283  | 25.435 | 1.00 | 39.73 |
| ATOM | 4609 | CE2 | TYR | 605 | 60.834 | -9.553  | 26.361 | 1.00 | 37.45 |
| ATOM | 4610 | CZ  | TYR | 605 | 60.678 | -9.166  | 27.677 | 1.00 | 40.34 |
| ATOM | 4611 | OH  | TYR | 605 | 61.666 | -9.466  | 28.601 | 1.00 | 43.16 |

PRT1

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4613 | C   | TYR | 605 | 58.582 | -6.113 | 24.224 | 1.00 | 39.45 |
| ATOM | 4614 | O   | TYR | 605 | 59.067 | -5.291 | 25.022 | 1.00 | 38.75 |
| ATOM | 4615 | N   | GLN | 606 | 59.129 | -6.410 | 23.040 | 1.00 | 36.41 |
| ATOM | 4617 | CA  | GLN | 606 | 60.361 | -5.787 | 22.550 | 1.00 | 35.20 |
| ATOM | 4618 | CB  | GLN | 606 | 60.695 | -6.303 | 21.150 | 1.00 | 34.86 |
| ATOM | 4619 | CG  | GLN | 606 | 61.286 | -7.695 | 21.118 | 1.00 | 32.21 |
| ATOM | 4620 | CD  | GLN | 606 | 61.502 | -8.205 | 19.709 | 1.00 | 32.63 |
| ATOM | 4621 | OE1 | GLN | 606 | 62.495 | -7.888 | 19.075 | 1.00 | 32.16 |
| ATOM | 4622 | NE2 | GLN | 606 | 60.568 | -9.004 | 19.216 | 1.00 | 34.62 |
| ATOM | 4625 | C   | GLN | 606 | 60.286 | -4.252 | 22.525 | 1.00 | 36.03 |
| ATOM | 4626 | O   | GLN | 606 | 61.209 | -3.572 | 22.989 | 1.00 | 38.81 |
| ATOM | 4627 | N   | VAL | 607 | 59.188 | -3.716 | 21.998 | 1.00 | 33.45 |
| ATOM | 4629 | CA  | VAL | 607 | 58.979 | -2.280 | 21.923 | 1.00 | 29.34 |
| ATOM | 4630 | CB  | VAL | 607 | 57.651 | -1.948 | 21.189 | 1.00 | 28.80 |
| ATOM | 4631 | CG1 | VAL | 607 | 57.260 | -0.495 | 21.401 | 1.00 | 26.68 |
| ATOM | 4632 | CG2 | VAL | 607 | 57.790 | -2.244 | 19.699 | 1.00 | 24.66 |
| ATOM | 4633 | C   | VAL | 607 | 58.965 | -1.698 | 23.339 | 1.00 | 31.35 |
| ATOM | 4634 | O   | VAL | 607 | 59.557 | -0.643 | 23.579 | 1.00 | 33.86 |
| ATOM | 4635 | N   | ALA | 608 | 58.317 | -2.402 | 24.270 | 1.00 | 30.17 |
| ATOM | 4637 | CA  | ALA | 608 | 58.235 | -1.971 | 25.667 | 1.00 | 28.98 |
| ATOM | 4638 | CB  | ALA | 608 | 57.255 | -2.836 | 26.440 | 1.00 | 28.30 |
| ATOM | 4639 | C   | ALA | 608 | 59.598 | -1.979 | 26.352 | 1.00 | 28.94 |
| ATOM | 4640 | O   | ALA | 608 | 59.889 | -1.091 | 27.155 | 1.00 | 27.83 |
| ATOM | 4641 | N   | ARG | 609 | 60.435 | -2.959 | 26.032 | 1.00 | 28.79 |
| ATOM | 4643 | CA  | ARG | 609 | 61.765 | -3.023 | 26.628 | 1.00 | 30.90 |
| ATOM | 4644 | CB  | ARG | 609 | 62.499 | -4.291 | 26.206 | 1.00 | 35.84 |
| ATOM | 4645 | CG  | ARG | 609 | 61.787 | -5.571 | 26.527 | 1.00 | 41.94 |
| ATOM | 4646 | CD  | ARG | 609 | 62.782 | -6.707 | 26.575 | 1.00 | 44.70 |
| ATOM | 4647 | NE  | ARG | 609 | 63.392 | -6.821 | 27.900 | 1.00 | 47.13 |
| ATOM | 4649 | CZ  | ARG | 609 | 64.444 | -7.589 | 28.183 | 1.00 | 48.71 |
| ATOM | 4650 | NH1 | ARG | 609 | 65.025 | -8.314 | 27.233 | 1.00 | 48.33 |
| ATOM | 4653 | NH2 | ARG | 609 | 64.897 | -7.655 | 29.428 | 1.00 | 49.11 |
| ATOM | 4656 | C   | ARG | 609 | 62.602 | -1.815 | 26.207 | 1.00 | 32.38 |
| ATOM | 4657 | O   | ARG | 609 | 63.215 | -1.148 | 27.058 | 1.00 | 32.63 |
| ATOM | 4658 | N   | GLY | 610 | 62.636 | -1.554 | 24.894 | 1.00 | 29.98 |
| ATOM | 4660 | CA  | GLY | 610 | 63.384 | -0.430 | 24.358 | 1.00 | 25.65 |
| ATOM | 4661 | C   | GLY | 610 | 62.969 | 0.837  | 25.061 | 1.00 | 25.44 |
| ATOM | 4662 | O   | GLY | 610 | 63.791 | 1.640  | 25.463 | 1.00 | 27.09 |
| ATOM | 4663 | N   | MET | 611 | 61.672 | 1.009  | 25.242 | 1.00 | 30.41 |
| ATOM | 4665 | CA  | MET | 611 | 61.167 | 2.176  | 25.943 | 1.00 | 31.34 |
| ATOM | 4666 | CB  | MET | 611 | 59.653 | 2.233  | 25.832 | 1.00 | 28.39 |
| ATOM | 4667 | CG  | MET | 611 | 59.195 | 2.595  | 24.449 | 1.00 | 25.17 |
| ATOM | 4668 | SD  | MET | 611 | 59.904 | 4.182  | 24.005 | 1.00 | 26.65 |
| ATOM | 4669 | CE  | MET | 611 | 59.458 | 5.158  | 25.453 | 1.00 | 19.78 |
| ATOM | 4670 | C   | MET | 611 | 61.600 | 2.176  | 27.412 | 1.00 | 34.05 |
| ATOM | 4671 | O   | MET | 611 | 62.008 | 3.211  | 27.929 | 1.00 | 33.79 |
| ATOM | 4672 | N   | GLU | 612 | 61.500 | 1.026  | 28.078 | 1.00 | 37.16 |
| ATOM | 4674 | CA  | GLU | 612 | 61.893 | 0.913  | 29.484 | 1.00 | 38.85 |
| ATOM | 4675 | CB  | GLU | 612 | 61.732 | -0.533 | 29.988 | 1.00 | 38.96 |
| ATOM | 4676 | CG  | GLU | 612 | 62.249 | -0.788 | 31.400 | 1.00 | 35.19 |
| ATOM | 4677 | CD  | GLU | 612 | 62.316 | -2.271 | 31.783 | 1.00 | 35.26 |
| ATOM | 4678 | OE1 | GLU | 612 | 62.605 | -3.123 | 30.912 | 1.00 | 29.29 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4679 | OE2 | GLU | 612 | 62.102 | -2.588 | 32.982 | 1.00 | 37.85 |
| ATOM | 4680 | C   | GLU | 612 | 63.353 | 1.364  | 29.628 | 1.00 | 40.01 |
| ATOM | 4681 | O   | GLU | 612 | 63.720 | 2.060  | 30.584 | 1.00 | 38.27 |
| ATOM | 4682 | N   | TYR | 613 | 64.176 | 0.972  | 28.662 | 1.00 | 40.33 |
| ATOM | 4684 | CA  | TYR | 613 | 65.575 | 1.362  | 28.664 | 1.00 | 39.71 |
| ATOM | 4685 | CB  | TYR | 613 | 66.333 | 0.722  | 27.494 | 1.00 | 39.03 |
| ATOM | 4686 | CG  | TYR | 613 | 67.800 | 1.100  | 27.467 | 1.00 | 41.41 |
| ATOM | 4687 | CD1 | TYR | 613 | 68.702 | 0.527  | 28.364 | 1.00 | 42.79 |
| ATOM | 4688 | CE1 | TYR | 613 | 70.048 | 0.905  | 28.386 | 1.00 | 40.21 |
| ATOM | 4689 | CD2 | TYR | 613 | 68.283 | 2.068  | 26.581 | 1.00 | 39.75 |
| ATOM | 4690 | CE2 | TYR | 613 | 69.621 | 2.454  | 26.596 | 1.00 | 39.01 |
| ATOM | 4691 | CZ  | TYR | 613 | 70.499 | 1.868  | 27.503 | 1.00 | 39.56 |
| ATOM | 4692 | OH  | TYR | 613 | 71.823 | 2.249  | 27.538 | 1.00 | 35.63 |
| ATOM | 4694 | C   | TYR | 613 | 65.642 | 2.881  | 28.562 | 1.00 | 38.71 |
| ATOM | 4695 | O   | TYR | 613 | 66.106 | 3.541  | 29.486 | 1.00 | 38.52 |
| ATOM | 4696 | N   | LEU | 614 | 65.126 | 3.423  | 27.460 | 1.00 | 37.22 |
| ATOM | 4698 | CA  | LEU | 614 | 65.128 | 4.864  | 27.212 | 1.00 | 35.66 |
| ATOM | 4699 | CB  | LEU | 614 | 64.223 | 5.202  | 26.025 | 1.00 | 35.27 |
| ATOM | 4700 | CG  | LEU | 614 | 64.687 | 4.699  | 24.659 | 1.00 | 33.09 |
| ATOM | 4701 | CD1 | LEU | 614 | 63.718 | 5.188  | 23.612 | 1.00 | 33.31 |
| ATOM | 4702 | CD2 | LEU | 614 | 66.099 | 5.184  | 24.363 | 1.00 | 31.20 |
| ATOM | 4703 | C   | LEU | 614 | 64.672 | 5.653  | 28.430 | 1.00 | 35.64 |
| ATOM | 4704 | O   | LEU | 614 | 65.298 | 6.639  | 28.816 | 1.00 | 34.54 |
| ATOM | 4705 | N   | ALA | 615 | 63.577 | 5.203  | 29.032 | 1.00 | 36.61 |
| ATOM | 4707 | CA  | ALA | 615 | 63.028 | 5.835  | 30.222 | 1.00 | 37.74 |
| ATOM | 4708 | CB  | ALA | 615 | 61.682 | 5.187  | 30.608 | 1.00 | 37.74 |
| ATOM | 4709 | C   | ALA | 615 | 64.021 | 5.776  | 31.389 | 1.00 | 37.30 |
| ATOM | 4710 | O   | ALA | 615 | 64.111 | 6.731  | 32.175 | 1.00 | 37.29 |
| ATOM | 4711 | N   | SER | 616 | 64.752 | 4.665  | 31.511 | 1.00 | 37.18 |
| ATOM | 4713 | CA  | SER | 616 | 65.741 | 4.534  | 32.577 | 1.00 | 36.92 |
| ATOM | 4714 | CB  | SER | 616 | 66.274 | 3.091  | 32.702 | 1.00 | 34.82 |
| ATOM | 4715 | OG  | SER | 616 | 67.106 | 2.680  | 31.628 | 1.00 | 28.79 |
| ATOM | 4717 | C   | SER | 616 | 66.870 | 5.516  | 32.287 | 1.00 | 38.57 |
| ATOM | 4718 | O   | SER | 616 | 67.633 | 5.902  | 33.179 | 1.00 | 38.30 |
| ATOM | 4719 | N   | LYS | 617 | 66.958 | 5.925  | 31.024 | 1.00 | 37.62 |
| ATOM | 4721 | CA  | LYS | 617 | 67.965 | 6.876  | 30.606 | 1.00 | 36.13 |
| ATOM | 4722 | CB  | LYS | 617 | 68.511 | 6.494  | 29.238 | 1.00 | 35.90 |
| ATOM | 4723 | CG  | LYS | 617 | 69.274 | 5.206  | 29.236 | 1.00 | 34.58 |
| ATOM | 4724 | CD  | LYS | 617 | 70.502 | 5.348  | 30.077 | 1.00 | 35.44 |
| ATOM | 4725 | CE  | LYS | 617 | 71.201 | 4.022  | 30.232 | 1.00 | 38.54 |
| ATOM | 4726 | NZ  | LYS | 617 | 72.566 | 4.211  | 30.790 | 1.00 | 41.54 |
| ATOM | 4730 | C   | LYS | 617 | 67.378 | 8.275  | 30.564 | 1.00 | 36.55 |
| ATOM | 4731 | O   | LYS | 617 | 67.943 | 9.155  | 29.934 | 1.00 | 40.26 |
| ATOM | 4732 | N   | LYS | 618 | 66.221 | 8.468  | 31.187 | 1.00 | 36.42 |
| ATOM | 4734 | CA  | LYS | 618 | 65.570 | 9.779  | 31.231 | 1.00 | 36.06 |
| ATOM | 4735 | CB  | LYS | 618 | 66.543 | 10.833 | 31.746 | 1.00 | 42.22 |
| ATOM | 4736 | CG  | LYS | 618 | 67.234 | 10.499 | 33.062 | 1.00 | 52.36 |
| ATOM | 4737 | CD  | LYS | 618 | 66.301 | 10.668 | 34.236 | 1.00 | 61.51 |
| ATOM | 4738 | CE  | LYS | 618 | 66.933 | 10.121 | 35.495 | 1.00 | 67.28 |
| ATOM | 4739 | NZ  | LYS | 618 | 65.965 | 10.161 | 36.618 | 1.00 | 73.99 |
| ATOM | 4743 | C   | LYS | 618 | 65.026 | 10.261 | 29.887 | 1.00 | 34.94 |
| ATOM | 4744 | O   | LYS | 618 | 64.562 | 11.393 | 29.781 | 1.00 | 34.69 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4745 | N   | CYS | 619 | 65.051 | 9.407  | 28.872 | 1.00 | 34.46 |
| ATOM | 4747 | CA  | CYS | 619 | 64.588 | 9.793  | 27.543 | 1.00 | 33.12 |
| ATOM | 4748 | CB  | CYS | 619 | 65.311 | 8.966  | 26.475 | 1.00 | 34.33 |
| ATOM | 4749 | SG  | CYS | 619 | 64.920 | 9.397  | 24.778 | 1.00 | 35.64 |
| ATOM | 4750 | C   | CYS | 619 | 63.075 | 9.699  | 27.355 | 1.00 | 32.13 |
| ATOM | 4751 | O   | CYS | 619 | 62.465 | 8.645  | 27.584 | 1.00 | 30.72 |
| ATOM | 4752 | N   | ILE | 620 | 62.477 | 10.818 | 26.960 | 1.00 | 32.70 |
| ATOM | 4754 | CA  | ILE | 620 | 61.046 | 10.909 | 26.708 | 1.00 | 32.75 |
| ATOM | 4755 | CB  | ILE | 620 | 60.440 | 12.129 | 27.421 | 1.00 | 33.55 |
| ATOM | 4756 | CG2 | ILE | 620 | 59.002 | 12.339 | 26.986 | 1.00 | 38.39 |
| ATOM | 4757 | CG1 | ILE | 620 | 60.486 | 11.913 | 28.933 | 1.00 | 30.71 |
| ATOM | 4758 | CD1 | ILE | 620 | 59.994 | 13.084 | 29.710 | 1.00 | 30.11 |
| ATOM | 4759 | C   | ILE | 620 | 60.969 | 11.086 | 25.206 | 1.00 | 33.31 |
| ATOM | 4760 | O   | ILE | 620 | 61.516 | 12.040 | 24.674 | 1.00 | 33.40 |
| ATOM | 4761 | N   | HIS | 621 | 60.356 | 10.114 | 24.533 | 1.00 | 33.56 |
| ATOM | 4763 | CA  | HIS | 621 | 60.230 | 10.092 | 23.087 | 1.00 | 32.30 |
| ATOM | 4764 | CB  | HIS | 621 | 59.866 | 8.668  | 22.642 | 1.00 | 29.55 |
| ATOM | 4765 | CG  | HIS | 621 | 60.049 | 8.402  | 21.173 | 1.00 | 27.32 |
| ATOM | 4766 | CD2 | HIS | 621 | 60.694 | 7.404  | 20.533 | 1.00 | 24.26 |
| ATOM | 4767 | ND1 | HIS | 621 | 59.462 | 9.173  | 20.187 | 1.00 | 25.20 |
| ATOM | 4769 | CE1 | HIS | 621 | 59.734 | 8.652  | 19.006 | 1.00 | 25.81 |
| ATOM | 4770 | NE2 | HIS | 621 | 60.481 | 7.579  | 19.184 | 1.00 | 26.65 |
| ATOM | 4772 | C   | HIS | 621 | 59.246 | 11.103 | 22.499 | 1.00 | 35.40 |
| ATOM | 4773 | O   | HIS | 621 | 59.459 | 11.574 | 21.388 | 1.00 | 39.18 |
| ATOM | 4774 | N   | ARG | 622 | 58.128 | 11.363 | 23.178 | 1.00 | 36.39 |
| ATOM | 4776 | CA  | ARG | 622 | 57.117 | 12.323 | 22.586 | 1.00 | 36.40 |
| ATOM | 4777 | CB  | ARG | 622 | 57.694 | 13.732 | 22.617 | 1.00 | 35.62 |
| ATOM | 4778 | CG  | ARG | 622 | 58.171 | 14.253 | 23.937 | 1.00 | 33.79 |
| ATOM | 4779 | CD  | ARG | 622 | 58.837 | 15.591 | 23.759 | 0.50 | 32.17 |
| ATOM | 4780 | NE  | ARG | 622 | 59.315 | 16.101 | 25.032 | 0.50 | 32.82 |
| ATOM | 4782 | CZ  | ARG | 622 | 60.487 | 15.786 | 25.575 | 0.50 | 34.07 |
| ATOM | 4783 | NH1 | ARG | 622 | 61.326 | 14.965 | 24.952 | 0.50 | 33.44 |
| ATOM | 4786 | NH2 | ARG | 622 | 60.803 | 16.268 | 26.769 | 0.50 | 32.70 |
| ATOM | 4789 | C   | ARG | 622 | 56.405 | 12.008 | 21.355 | 1.00 | 36.23 |
| ATOM | 4790 | O   | ARG | 622 | 55.527 | 12.763 | 20.936 | 1.00 | 35.04 |
| ATOM | 4791 | N   | ASP | 623 | 56.806 | 10.938 | 20.668 | 1.00 | 35.84 |
| ATOM | 4793 | CA  | ASP | 623 | 56.128 | 10.538 | 19.436 | 1.00 | 35.68 |
| ATOM | 4794 | CB  | ASP | 623 | 56.574 | 11.352 | 18.221 | 1.00 | 38.71 |
| ATOM | 4795 | CG  | ASP | 623 | 55.736 | 11.036 | 16.974 | 1.00 | 46.29 |
| ATOM | 4796 | OD1 | ASP | 623 | 56.277 | 11.082 | 15.851 | 1.00 | 52.33 |
| ATOM | 4797 | OD2 | ASP | 623 | 54.535 | 10.715 | 17.119 | 1.00 | 50.45 |
| ATOM | 4798 | C   | ASP | 623 | 56.271 | 9.052  | 19.162 | 1.00 | 32.98 |
| ATOM | 4799 | O   | ASP | 623 | 56.664 | 8.645  | 18.073 | 1.00 | 30.90 |
| ATOM | 4800 | N   | LEU | 624 | 56.015 | 8.244  | 20.179 | 1.00 | 31.16 |
| ATOM | 4802 | CA  | LEU | 624 | 56.099 | 6.801  | 20.029 | 1.00 | 31.71 |
| ATOM | 4803 | CB  | LEU | 624 | 56.070 | 6.144  | 21.407 | 1.00 | 28.48 |
| ATOM | 4804 | CG  | LEU | 624 | 56.049 | 4.618  | 21.514 | 1.00 | 28.13 |
| ATOM | 4805 | CD1 | LEU | 624 | 57.225 | 3.975  | 20.799 | 1.00 | 27.00 |
| ATOM | 4806 | CD2 | LEU | 624 | 56.072 | 4.283  | 22.987 | 1.00 | 29.10 |
| ATOM | 4807 | C   | LEU | 624 | 54.917 | 6.320  | 19.185 | 1.00 | 32.67 |
| ATOM | 4808 | O   | LEU | 624 | 53.763 | 6.608  | 19.508 | 1.00 | 35.74 |
| ATOM | 4809 | N   | ALA | 625 | 55.214 | 5.640  | 18.081 | 1.00 | 29.82 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4811 | CA  | ALA | 625 | 54.194 | 5.106  | 17.181 | 1.00 | 28.29 |
| ATOM | 4812 | CB  | ALA | 625 | 53.682 | 6.182  | 16.245 | 1.00 | 26.72 |
| ATOM | 4813 | C   | ALA | 625 | 54.895 | 4.031  | 16.395 | 1.00 | 28.40 |
| ATOM | 4814 | O   | ALA | 625 | 56.118 | 4.028  | 16.343 | 1.00 | 32.12 |
| ATOM | 4815 | N   | ALA | 626 | 54.131 | 3.135  | 15.770 | 1.00 | 28.55 |
| ATOM | 4817 | CA  | ALA | 626 | 54.687 | 2.028  | 14.979 | 1.00 | 26.25 |
| ATOM | 4818 | CB  | ALA | 626 | 53.577 | 1.169  | 14.365 | 1.00 | 23.54 |
| ATOM | 4819 | C   | ALA | 626 | 55.569 | 2.573  | 13.892 | 1.00 | 23.68 |
| ATOM | 4820 | O   | ALA | 626 | 56.544 | 1.944  | 13.519 | 1.00 | 26.07 |
| ATOM | 4821 | N   | ARG | 627 | 55.208 | 3.744  | 13.378 | 1.00 | 23.80 |
| ATOM | 4823 | CA  | ARG | 627 | 55.980 | 4.413  | 12.338 | 1.00 | 26.57 |
| ATOM | 4824 | CB  | ARG | 627 | 55.289 | 5.728  | 11.914 | 1.00 | 25.91 |
| ATOM | 4825 | CG  | ARG | 627 | 54.991 | 6.692  | 13.055 | 1.00 | 27.60 |
| ATOM | 4826 | CD  | ARG | 627 | 54.711 | 8.130  | 12.584 | 1.00 | 33.01 |
| ATOM | 4827 | NE  | ARG | 627 | 54.260 | 8.978  | 13.691 | 1.00 | 34.18 |
| ATOM | 4829 | CZ  | ARG | 627 | 52.997 | 9.067  | 14.091 | 1.00 | 35.88 |
| ATOM | 4830 | NH1 | ARG | 627 | 52.056 | 8.380  | 13.460 | 1.00 | 38.89 |
| ATOM | 4833 | NH2 | ARG | 627 | 52.689 | 9.748  | 15.183 | 1.00 | 36.43 |
| ATOM | 4836 | C   | ARG | 627 | 57.439 | 4.686  | 12.785 | 1.00 | 29.03 |
| ATOM | 4837 | O   | ARG | 627 | 58.362 | 4.606  | 11.972 | 1.00 | 29.24 |
| ATOM | 4838 | N   | ASN | 628 | 57.634 | 4.938  | 14.087 | 1.00 | 29.51 |
| ATOM | 4840 | CA  | ASN | 628 | 58.954 | 5.234  | 14.645 | 1.00 | 26.41 |
| ATOM | 4841 | CB  | ASN | 628 | 58.864 | 6.359  | 15.676 | 1.00 | 25.32 |
| ATOM | 4842 | CG  | ASN | 628 | 58.539 | 7.687  | 15.035 | 1.00 | 28.11 |
| ATOM | 4843 | OD1 | ASN | 628 | 59.079 | 8.028  | 13.999 | 1.00 | 32.09 |
| ATOM | 4844 | ND2 | ASN | 628 | 57.639 | 8.426  | 15.628 | 1.00 | 27.88 |
| ATOM | 4847 | C   | ASN | 628 | 59.684 | 4.039  | 15.225 | 1.00 | 25.77 |
| ATOM | 4848 | O   | ASN | 628 | 60.641 | 4.188  | 16.001 | 1.00 | 24.77 |
| ATOM | 4849 | N   | VAL | 629 | 59.209 | 3.853  | 14.874 | 1.00 | 26.63 |
| ATOM | 4851 | CA  | VAL | 629 | 59.828 | 1.610  | 15.315 | 1.00 | 25.34 |
| ATOM | 4852 | CB  | VAL | 629 | 58.812 | 0.693  | 16.007 | 1.00 | 21.26 |
| ATOM | 4853 | CG1 | VAL | 629 | 59.492 | -0.604 | 16.412 | 1.00 | 22.96 |
| ATOM | 4854 | CG2 | VAL | 629 | 58.205 | 1.398  | 17.207 | 1.00 | 16.65 |
| ATOM | 4855 | C   | VAL | 629 | 60.266 | 0.962  | 14.007 | 1.00 | 26.79 |
| ATOM | 4856 | O   | VAL | 629 | 59.454 | 0.839  | 13.087 | 1.00 | 28.60 |
| ATOM | 4857 | N   | LEU | 630 | 61.542 | 0.603  | 13.904 | 1.00 | 25.91 |
| ATOM | 4859 | CA  | LEU | 630 | 62.062 | -0.021 | 12.685 | 1.00 | 26.95 |
| ATOM | 4860 | CB  | LEU | 630 | 63.297 | 0.733  | 12.210 | 1.00 | 22.79 |
| ATOM | 4861 | CG  | LEU | 630 | 63.044 | 2.242  | 12.111 | 1.00 | 20.04 |
| ATOM | 4862 | CD1 | LEU | 630 | 64.345 | 2.944  | 11.972 | 1.00 | 11.86 |
| ATOM | 4863 | CD2 | LEU | 630 | 62.111 | 2.603  | 10.965 | 1.00 | 19.22 |
| ATOM | 4864 | C   | LEU | 630 | 62.367 | -1.492 | 12.961 | 1.00 | 28.01 |
| ATOM | 4865 | O   | LEU | 630 | 62.629 | -1.852 | 14.101 | 1.00 | 28.26 |
| ATOM | 4866 | N   | VAL | 631 | 62.246 | -2.346 | 11.946 | 1.00 | 30.82 |
| ATOM | 4868 | CA  | VAL | 631 | 62.468 | -3.790 | 12.098 | 1.00 | 31.75 |
| ATOM | 4869 | CB  | VAL | 631 | 61.194 | -4.607 | 11.659 | 1.00 | 30.04 |
| ATOM | 4870 | CG1 | VAL | 631 | 61.346 | -6.085 | 12.026 | 1.00 | 29.25 |
| ATOM | 4871 | CG2 | VAL | 631 | 59.937 | -4.030 | 12.290 | 1.00 | 24.59 |
| ATOM | 4872 | C   | VAL | 631 | 63.697 | -4.286 | 11.305 | 1.00 | 35.24 |
| ATOM | 4873 | O   | VAL | 631 | 63.849 | -3.999 | 10.097 | 1.00 | 34.02 |
| ATOM | 4874 | N   | THR | 632 | 64.551 | -5.052 | 11.979 | 1.00 | 36.24 |
| ATOM | 4876 | CA  | THR | 632 | 65.770 | -5.574 | 11.365 | 1.00 | 38.23 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4877 | CB  | THR | 632 | 66.843 | -5.836  | 12.416 | 1.00 | 38.21 |
| ATOM | 4878 | OG1 | THR | 632 | 66.423 | -6.908  | 13.272 | 1.00 | 38.31 |
| ATOM | 4880 | CG2 | THR | 632 | 67.069 | -4.582  | 13.238 | 1.00 | 40.22 |
| ATOM | 4881 | C   | THR | 632 | 65.526 | -6.854  | 10.593 | 1.00 | 39.17 |
| ATOM | 4882 | O   | THR | 632 | 64.471 | -7.457  | 10.744 | 1.00 | 41.26 |
| ATOM | 4883 | N   | GLU | 633 | 66.496 | -7.259  | 9.766  | 1.00 | 41.23 |
| ATOM | 4885 | CA  | GLU | 633 | 66.397 | -8.483  | 8.960  | 1.00 | 42.62 |
| ATOM | 4886 | CB  | GLU | 633 | 67.677 | -8.712  | 8.154  | 1.00 | 44.25 |
| ATOM | 4887 | CG  | GLU | 633 | 67.610 | -9.884  | 7.154  | 1.00 | 51.05 |
| ATOM | 4888 | CD  | GLU | 633 | 66.825 | -9.594  | 5.858  | 1.00 | 56.28 |
| ATOM | 4889 | OE1 | GLU | 633 | 66.390 | -8.444  | 5.626  | 1.00 | 62.64 |
| ATOM | 4890 | OE2 | GLU | 633 | 66.651 | -10.536 | 5.058  | 1.00 | 58.41 |
| ATOM | 4891 | C   | GLU | 633 | 66.097 | -9.722  | 9.797  | 1.00 | 41.83 |
| ATOM | 4892 | O   | GLU | 633 | 65.578 | -10.704 | 9.288  | 1.00 | 42.77 |
| ATOM | 4893 | N   | ASP | 634 | 66.415 | -9.665  | 11.082 | 1.00 | 43.14 |
| ATOM | 4895 | CA  | ASP | 634 | 66.167 | -10.784 | 11.978 | 1.00 | 44.01 |
| ATOM | 4896 | CB  | ASP | 634 | 67.361 | -11.007 | 12.914 | 1.00 | 49.37 |
| ATOM | 4897 | CG  | ASP | 634 | 68.636 | -11.396 | 12.166 | 1.00 | 54.70 |
| ATOM | 4898 | OD1 | ASP | 634 | 68.683 | -12.515 | 11.595 | 1.00 | 55.43 |
| ATOM | 4899 | OD2 | ASP | 634 | 69.602 | -10.596 | 12.167 | 1.00 | 56.17 |
| ATOM | 4900 | C   | ASP | 634 | 64.925 | -10.507 | 12.801 | 1.00 | 43.95 |
| ATOM | 4901 | O   | ASP | 634 | 64.754 | -11.085 | 13.864 | 1.00 | 45.92 |
| ATOM | 4902 | N   | ASN | 635 | 64.075 | -9.604  | 12.316 | 1.00 | 44.71 |
| ATOM | 4904 | CA  | ASN | 635 | 62.822 | -9.220  | 12.980 | 1.00 | 43.07 |
| ATOM | 4905 | CB  | ASN | 635 | 61.854 | -10.404 | 13.018 | 1.00 | 45.50 |
| ATOM | 4906 | CG  | ASN | 635 | 61.606 | -10.994 | 11.653 | 1.00 | 45.43 |
| ATOM | 4907 | OD1 | ASN | 635 | 60.997 | -10.369 | 10.788 | 1.00 | 49.56 |
| ATOM | 4908 | ND2 | ASN | 635 | 62.114 | -12.190 | 11.435 | 1.00 | 48.18 |
| ATOM | 4911 | C   | ASN | 635 | 62.927 | -8.609  | 14.380 | 1.00 | 41.64 |
| ATOM | 4912 | O   | ASN | 635 | 62.050 | -8.814  | 15.221 | 1.00 | 41.69 |
| ATOM | 4913 | N   | VAL | 636 | 63.984 | -7.843  | 14.627 | 1.00 | 41.17 |
| ATOM | 4915 | CA  | VAL | 636 | 64.177 | -7.178  | 15.922 | 1.00 | 39.01 |
| ATOM | 4916 | CB  | VAL | 636 | 65.692 | -7.002  | 16.259 | 1.00 | 40.66 |
| ATOM | 4917 | CG1 | VAL | 636 | 65.882 | -6.209  | 17.560 | 1.00 | 35.04 |
| ATOM | 4918 | CG2 | VAL | 636 | 66.355 | -8.360  | 16.367 | 1.00 | 41.69 |
| ATOM | 4919 | C   | VAL | 636 | 63.544 | -5.789  | 15.925 | 1.00 | 36.77 |
| ATOM | 4920 | O   | VAL | 636 | 63.817 | -4.989  | 15.045 | 1.00 | 38.35 |
| ATOM | 4921 | N   | MET | 637 | 62.696 | -5.518  | 16.908 | 1.00 | 35.71 |
| ATOM | 4923 | CA  | MET | 637 | 62.049 | -4.216  | 17.031 | 1.00 | 33.65 |
| ATOM | 4924 | CB  | MET | 637 | 60.783 | -4.319  | 17.884 | 1.00 | 38.24 |
| ATOM | 4925 | CG  | MET | 637 | 59.737 | -5.314  | 17.371 | 1.00 | 41.34 |
| ATOM | 4926 | SD  | MET | 637 | 59.128 | -4.993  | 15.695 | 1.00 | 42.24 |
| ATOM | 4927 | CE  | MET | 637 | 59.249 | -6.621  | 14.976 | 1.00 | 39.27 |
| ATOM | 4928 | C   | MET | 637 | 63.001 | -3.209  | 17.668 | 1.00 | 32.62 |
| ATOM | 4929 | O   | MET | 637 | 63.524 | -3.436  | 18.765 | 1.00 | 30.56 |
| ATOM | 4930 | N   | LYS | 638 | 63.173 | -2.070  | 17.008 | 1.00 | 32.03 |
| ATOM | 4932 | CA  | LYS | 638 | 64.073 | -1.027  | 17.492 | 1.00 | 28.77 |
| ATOM | 4933 | CB  | LYS | 638 | 65.351 | -1.022  | 16.654 | 1.00 | 27.71 |
| ATOM | 4934 | CG  | LYS | 638 | 66.245 | -2.211  | 16.896 | 1.00 | 25.04 |
| ATOM | 4935 | CD  | LYS | 638 | 67.429 | -2.170  | 15.976 | 1.00 | 24.50 |
| ATOM | 4936 | CE  | LYS | 638 | 68.443 | -3.187  | 16.390 | 1.00 | 22.85 |
| ATOM | 4937 | NZ  | LYS | 638 | 69.121 | -2.803  | 17.651 | 1.00 | 24.79 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4941 | C   | LYS | 638 | 63.443 | 0.364  | 17.446 | 1.00 | 28.00 |
| ATOM | 4942 | O   | LYS | 638 | 62.977 | 0.799  | 16.391 | 1.00 | 25.60 |
| ATOM | 4943 | N   | ILE | 639 | 63.410 | 1.032  | 18.601 | 1.00 | 25.32 |
| ATOM | 4945 | CA  | ILE | 639 | 62.857 | 2.379  | 18.721 | 1.00 | 25.91 |
| ATOM | 4946 | CB  | ILE | 639 | 62.800 | 2.875  | 20.201 | 1.00 | 25.56 |
| ATOM | 4947 | CG2 | ILE | 639 | 62.074 | 4.208  | 20.279 | 1.00 | 22.82 |
| ATOM | 4948 | CG1 | ILE | 639 | 62.142 | 1.835  | 21.118 | 1.00 | 28.00 |
| ATOM | 4949 | CD1 | ILE | 639 | 60.634 | 1.748  | 21.003 | 1.00 | 33.25 |
| ATOM | 4950 | C   | ILE | 639 | 63.739 | 3.363  | 17.955 | 1.00 | 26.87 |
| ATOM | 4951 | O   | ILE | 639 | 64.968 | 3.381  | 18.125 | 1.00 | 24.13 |
| ATOM | 4952 | N   | ALA | 640 | 63.108 | 4.170  | 17.108 | 1.00 | 26.74 |
| ATOM | 4954 | CA  | ALA | 640 | 63.825 | 5.176  | 16.339 | 1.00 | 30.62 |
| ATOM | 4955 | CB  | ALA | 640 | 63.624 | 4.939  | 14.851 | 1.00 | 30.31 |
| ATOM | 4956 | C   | ALA | 640 | 63.338 | 6.572  | 16.739 | 1.00 | 32.53 |
| ATOM | 4957 | O   | ALA | 640 | 62.289 | 6.706  | 17.371 | 1.00 | 33.83 |
| ATOM | 4958 | N   | ASP | 641 | 64.082 | 7.605  | 16.351 | 1.00 | 33.05 |
| ATOM | 4960 | CA  | ASP | 641 | 63.749 | 9.010  | 16.656 | 1.00 | 37.66 |
| ATOM | 4961 | CB  | ASP | 641 | 62.539 | 9.489  | 15.840 | 1.00 | 42.62 |
| ATOM | 4962 | CG  | ASP | 641 | 62.928 | 10.026 | 14.471 | 1.00 | 50.92 |
| ATOM | 4963 | OD1 | ASP | 641 | 64.092 | 9.833  | 14.021 | 1.00 | 59.21 |
| ATOM | 4964 | OD2 | ASP | 641 | 62.063 | 10.652 | 13.823 | 1.00 | 54.05 |
| ATOM | 4965 | C   | ASP | 641 | 63.545 | 9.367  | 18.125 | 1.00 | 37.85 |
| ATOM | 4966 | O   | ASP | 641 | 62.805 | 10.294 | 18.448 | 1.00 | 39.10 |
| ATOM | 4967 | N   | PHE | 642 | 64.204 | 8.635  | 15.016 | 1.00 | 37.47 |
| ATOM | 4969 | CA  | PHE | 642 | 64.099 | 8.874  | 20.456 | 1.00 | 36.47 |
| ATOM | 4970 | CB  | PHE | 642 | 64.403 | 7.581  | 21.226 | 1.00 | 32.22 |
| ATOM | 4971 | CG  | PHE | 642 | 65.786 | 7.013  | 20.964 | 1.00 | 30.65 |
| ATOM | 4972 | CD1 | PHE | 642 | 66.906 | 7.537  | 21.607 | 1.00 | 32.45 |
| ATOM | 4973 | CD2 | PHE | 642 | 65.969 | 5.981  | 20.054 | 1.00 | 28.53 |
| ATOM | 4974 | CE1 | PHE | 642 | 68.180 | 7.050  | 21.342 | 1.00 | 30.88 |
| ATOM | 4975 | CE2 | PHE | 642 | 67.234 | 5.494  | 19.789 | 1.00 | 27.74 |
| ATOM | 4976 | CZ  | PHE | 642 | 68.344 | 6.027  | 20.431 | 1.00 | 29.64 |
| ATOM | 4977 | C   | PHE | 642 | 65.050 | 10.001 | 20.907 | 1.00 | 39.69 |
| ATOM | 4978 | O   | PHE | 642 | 64.967 | 10.469 | 22.047 | 1.00 | 38.22 |
| ATOM | 4979 | N   | GLY | 643 | 65.966 | 10.400 | 20.015 | 1.00 | 41.08 |
| ATOM | 4981 | CA  | GLY | 643 | 66.925 | 11.447 | 20.324 | 1.00 | 40.65 |
| ATOM | 4982 | C   | GLY | 643 | 66.694 | 12.747 | 19.571 | 1.00 | 43.53 |
| ATOM | 4983 | O   | GLY | 643 | 67.500 | 13.666 | 19.688 | 1.00 | 41.10 |
| ATOM | 4984 | N   | LEU | 644 | 65.617 | 12.825 | 18.786 | 1.00 | 48.35 |
| ATOM | 4986 | CA  | LEU | 644 | 65.306 | 14.034 | 18.019 | 1.00 | 51.11 |
| ATOM | 4987 | CB  | LEU | 644 | 63.962 | 13.907 | 17.314 | 1.00 | 50.28 |
| ATOM | 4988 | CG  | LEU | 644 | 63.900 | 13.059 | 16.057 | 1.00 | 54.03 |
| ATOM | 4989 | CD1 | LEU | 644 | 62.541 | 13.278 | 15.413 | 1.00 | 57.34 |
| ATOM | 4990 | CD2 | LEU | 644 | 65.006 | 13.467 | 15.105 | 1.00 | 56.95 |
| ATOM | 4991 | C   | LEU | 644 | 65.248 | 15.257 | 18.894 | 1.00 | 52.68 |
| ATOM | 4992 | O   | LEU | 644 | 64.850 | 15.175 | 20.053 | 1.00 | 54.95 |
| ATOM | 4993 | N   | ALA | 645 | 65.629 | 16.399 | 18.332 | 1.00 | 54.61 |
| ATOM | 4995 | CA  | ALA | 645 | 65.610 | 17.656 | 19.073 | 1.00 | 54.60 |
| ATOM | 4996 | CB  | ALA | 645 | 66.495 | 18.684 | 18.382 | 1.00 | 53.32 |
| ATOM | 4997 | C   | ALA | 645 | 64.178 | 18.185 | 19.215 | 1.00 | 54.09 |
| ATOM | 4998 | O   | ALA | 645 | 63.716 | 18.488 | 20.322 | 1.00 | 53.14 |
| ATOM | 4999 | N   | ASP | 652 | 52.340 | 21.795 | 14.895 | 1.00 | 91.33 |

|      |      |     |     |     |        |        |        |      |        |
|------|------|-----|-----|-----|--------|--------|--------|------|--------|
| ATOM | 5001 | CA  | ASP | 652 | 51.194 | 21.914 | 14.004 | 1.00 | 90.97  |
| ATOM | 5002 | CB  | ASP | 652 | 51.650 | 22.138 | 12.555 | 1.00 | 92.06  |
| ATOM | 5003 | CG  | ASP | 652 | 50.488 | 22.434 | 11.606 | 1.00 | 94.00  |
| ATOM | 5004 | OD1 | ASP | 652 | 49.479 | 23.032 | 12.042 | 1.00 | 95.25  |
| ATOM | 5005 | OD2 | ASP | 652 | 50.586 | 22.075 | 10.414 | 1.00 | 94.81  |
| ATOM | 5006 | C   | ASP | 652 | 50.352 | 20.652 | 14.103 | 1.00 | 90.61  |
| ATOM | 5007 | O   | ASP | 652 | 50.645 | 19.641 | 13.463 | 1.00 | 91.26  |
| ATOM | 5008 | N   | TYR | 653 | 49.289 | 20.737 | 14.895 | 1.00 | 89.65  |
| ATOM | 5010 | CA  | TYR | 653 | 48.381 | 19.619 | 15.110 | 1.00 | 88.25  |
| ATOM | 5011 | CB  | TYR | 653 | 47.306 | 20.003 | 16.133 | 1.00 | 88.16  |
| ATOM | 5012 | CG  | TYR | 653 | 47.800 | 20.140 | 17.559 | 1.00 | 88.74  |
| ATOM | 5013 | CD1 | TYR | 653 | 47.047 | 20.818 | 18.513 | 1.00 | 90.00  |
| ATOM | 5014 | CE1 | TYR | 653 | 47.477 | 20.915 | 19.839 | 1.00 | 90.70  |
| ATOM | 5015 | CD2 | TYR | 653 | 49.006 | 19.559 | 17.964 | 1.00 | 89.14  |
| ATOM | 5016 | CE2 | TYR | 653 | 49.443 | 19.649 | 19.280 | 1.00 | 89.49  |
| ATOM | 5017 | CZ  | TYR | 653 | 48.675 | 20.325 | 20.214 | 1.00 | 89.80  |
| ATOM | 5018 | OH  | TYR | 653 | 49.109 | 20.394 | 21.518 | 1.00 | 89.81  |
| ATOM | 5020 | C   | TYR | 653 | 47.701 | 19.165 | 13.830 | 1.00 | 87.32  |
| ATOM | 5021 | O   | TYR | 653 | 47.180 | 18.057 | 13.759 | 1.00 | 87.70  |
| ATOM | 5022 | N   | TYR | 654 | 47.734 | 20.013 | 12.814 | 1.00 | 86.51  |
| ATOM | 5024 | CA  | TYR | 654 | 47.087 | 19.707 | 11.553 | 1.00 | 87.08  |
| ATOM | 5025 | CB  | TYR | 654 | 46.387 | 20.959 | 11.028 | 1.00 | 88.45  |
| ATOM | 5026 | CG  | TYR | 654 | 45.375 | 21.497 | 12.014 | 1.00 | 90.25  |
| ATOM | 5027 | CD1 | TYR | 654 | 45.781 | 22.017 | 13.246 | 1.00 | 90.15  |
| ATOM | 5028 | CE1 | TYR | 654 | 44.857 | 22.431 | 14.197 | 1.00 | 90.94  |
| ATOM | 5029 | CD2 | TYR | 654 | 44.012 | 21.419 | 11.753 | 1.00 | 91.22  |
| ATOM | 5030 | CE2 | TYR | 654 | 43.078 | 21.833 | 12.698 | 1.00 | 93.22  |
| ATOM | 5031 | CZ  | TYR | 654 | 43.506 | 22.335 | 13.918 | 1.00 | 92.39  |
| ATOM | 5032 | OH  | TYR | 654 | 42.588 | 22.717 | 14.872 | 1.00 | 94.38  |
| ATOM | 5034 | C   | TYR | 654 | 48.012 | 19.115 | 10.503 | 1.00 | 87.34  |
| ATOM | 5035 | O   | TYR | 654 | 47.567 | 18.767 | 9.410  | 1.00 | 88.29  |
| ATOM | 5036 | N   | LYS | 655 | 49.290 | 18.971 | 10.836 | 1.00 | 86.67  |
| ATOM | 5038 | CA  | LYS | 655 | 50.233 | 18.406 | 9.987  | 1.00 | 87.62  |
| ATOM | 5039 | CB  | LYS | 655 | 51.666 | 18.814 | 10.229 | 1.00 | 90.01  |
| ATOM | 5040 | CG  | LYS | 655 | 52.688 | 18.252 | 9.251  | 1.00 | 95.23  |
| ATOM | 5041 | CD  | LYS | 655 | 54.106 | 18.646 | 9.607  | 1.00 | 99.04  |
| ATOM | 5042 | CE  | LYS | 655 | 55.108 | 17.832 | 8.789  | 1.00 | 102.26 |
| ATOM | 5043 | NZ  | LYS | 655 | 56.528 | 18.184 | 9.099  | 1.00 | 104.44 |
| ATOM | 5047 | C   | LYS | 655 | 50.102 | 16.890 | 9.896  | 1.00 | 87.61  |
| ATOM | 5048 | O   | LYS | 655 | 50.233 | 16.259 | 10.945 | 1.00 | 87.58  |
| ATOM | 5049 | N   | LYS | 656 | 49.787 | 16.319 | 8.737  | 1.00 | 87.88  |
| ATOM | 5051 | CA  | LYS | 656 | 49.639 | 14.875 | 8.603  | 1.00 | 89.03  |
| ATOM | 5052 | CB  | LYS | 656 | 48.795 | 14.537 | 7.376  | 1.00 | 90.44  |
| ATOM | 5053 | CG  | LYS | 656 | 47.313 | 14.802 | 7.535  | 1.00 | 93.30  |
| ATOM | 5054 | CD  | LYS | 656 | 46.590 | 14.599 | 6.213  | 1.00 | 96.87  |
| ATOM | 5055 | CE  | LYS | 656 | 45.089 | 14.555 | 6.406  | 1.00 | 99.35  |
| ATOM | 5056 | NZ  | LYS | 656 | 44.362 | 14.518 | 5.106  | 1.00 | 102.42 |
| ATOM | 5060 | C   | LYS | 656 | 51.004 | 14.206 | 8.487  | 1.00 | 88.57  |
| ATOM | 5061 | O   | LYS | 656 | 51.915 | 14.749 | 7.855  | 1.00 | 88.38  |
| ATOM | 5062 | N   | GLY | 660 | 49.270 | 10.021 | 5.735  | 1.00 | 61.58  |
| ATOM | 5064 | CA  | GLY | 660 | 48.416 | 11.168 | 6.005  | 1.00 | 58.75  |
| ATOM | 5065 | C   | GLY | 660 | 47.664 | 11.092 | 7.324  | 1.00 | 57.22  |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5066 | O   | GLY | 660 | 46.555 | 11.624 | 7.437  | 1.00 | 58.01 |
| ATOM | 5067 | N   | ARG | 661 | 48.231 | 10.374 | 8.293  | 1.00 | 55.37 |
| ATOM | 5069 | CA  | ARG | 661 | 47.631 | 10.247 | 9.622  | 1.00 | 51.19 |
| ATOM | 5070 | CB  | ARG | 661 | 48.095 | 8.965  | 10.337 | 1.00 | 51.89 |
| ATOM | 5071 | CG  | ARG | 661 | 47.756 | 7.663  | 9.612  | 1.00 | 51.56 |
| ATOM | 5072 | CD  | ARG | 661 | 48.057 | 6.443  | 10.484 | 1.00 | 50.77 |
| ATOM | 5073 | NE  | ARG | 661 | 47.834 | 5.181  | 9.772  | 1.00 | 50.04 |
| ATOM | 5075 | CZ  | ARG | 661 | 48.015 | 3.974  | 10.307 | 1.00 | 48.12 |
| ATOM | 5076 | NH1 | ARG | 661 | 48.421 | 3.855  | 11.569 | 1.00 | 43.28 |
| ATOM | 5079 | NH2 | ARG | 661 | 47.788 | 2.882  | 9.578  | 1.00 | 43.69 |
| ATOM | 5082 | C   | ARG | 661 | 48.041 | 11.463 | 10.446 | 1.00 | 46.22 |
| ATOM | 5083 | O   | ARG | 661 | 48.998 | 12.162 | 10.097 | 1.00 | 44.78 |
| ATOM | 5084 | N   | LEU | 662 | 47.328 | 11.703 | 11.542 | 1.00 | 41.80 |
| ATOM | 5086 | CA  | LEU | 662 | 47.621 | 12.837 | 12.419 | 1.00 | 36.78 |
| ATOM | 5087 | CB  | LEU | 662 | 46.342 | 13.596 | 12.758 | 1.00 | 33.05 |
| ATOM | 5088 | CG  | LEU | 662 | 45.642 | 14.279 | 11.585 | 1.00 | 28.24 |
| ATOM | 5089 | CD1 | LEU | 662 | 44.198 | 14.611 | 11.935 | 1.00 | 24.66 |
| ATOM | 5090 | CD2 | LEU | 662 | 46.429 | 15.511 | 11.217 | 1.00 | 28.35 |
| ATOM | 5091 | C   | LEU | 662 | 48.278 | 12.328 | 13.695 | 1.00 | 36.10 |
| ATOM | 5092 | O   | LEU | 662 | 47.695 | 11.521 | 14.431 | 1.00 | 34.46 |
| ATOM | 5093 | N   | PRO | 663 | 49.526 | 12.751 | 13.945 | 1.00 | 35.83 |
| ATOM | 5094 | CD  | PRO | 663 | 50.360 | 13.537 | 13.022 | 1.00 | 37.72 |
| ATOM | 5095 | CA  | PRO | 663 | 50.310 | 12.365 | 15.119 | 1.00 | 35.68 |
| ATOM | 5096 | CB  | PRO | 663 | 51.611 | 13.130 | 14.914 | 1.00 | 35.23 |
| ATOM | 5097 | CG  | PRO | 663 | 51.756 | 13.134 | 13.437 | 1.00 | 36.10 |
| ATOM | 5098 | C   | PRO | 663 | 49.660 | 12.703 | 16.453 | 1.00 | 35.87 |
| ATOM | 5099 | O   | PRO | 663 | 49.958 | 12.069 | 17.469 | 1.00 | 39.86 |
| ATOM | 5100 | N   | VAL | 664 | 48.787 | 13.705 | 16.466 | 1.00 | 33.54 |
| ATOM | 5102 | CA  | VAL | 664 | 48.109 | 14.076 | 17.699 | 1.00 | 31.24 |
| ATOM | 5103 | CB  | VAL | 664 | 47.196 | 15.321 | 17.520 | 1.00 | 30.45 |
| ATOM | 5104 | CG1 | VAL | 664 | 48.025 | 16.480 | 17.051 | 1.00 | 32.54 |
| ATOM | 5105 | CG2 | VAL | 664 | 46.093 | 15.062 | 16.523 | 1.00 | 34.77 |
| ATOM | 5106 | C   | VAL | 664 | 47.301 | 12.895 | 18.233 | 1.00 | 31.33 |
| ATOM | 5107 | O   | VAL | 664 | 47.095 | 12.782 | 19.438 | 1.00 | 32.66 |
| ATOM | 5108 | N   | LYS | 665 | 46.940 | 11.968 | 17.345 | 1.00 | 30.44 |
| ATOM | 5110 | CA  | LYS | 665 | 46.153 | 10.795 | 17.719 | 1.00 | 28.43 |
| ATOM | 5111 | CB  | LYS | 665 | 45.596 | 10.133 | 16.466 | 1.00 | 24.82 |
| ATOM | 5112 | CG  | LYS | 665 | 44.700 | 11.080 | 15.687 | 1.00 | 27.50 |
| ATOM | 5113 | CD  | LYS | 665 | 44.096 | 10.466 | 14.442 | 1.00 | 26.62 |
| ATOM | 5114 | CE  | LYS | 665 | 42.967 | 11.326 | 13.909 | 1.00 | 21.64 |
| ATOM | 5115 | NZ  | LYS | 665 | 42.479 | 10.850 | 12.584 | 1.00 | 25.29 |
| ATOM | 5119 | C   | LYS | 665 | 46.889 | 9.794  | 18.615 | 1.00 | 29.56 |
| ATOM | 5120 | O   | LYS | 665 | 46.295 | 8.836  | 19.095 | 1.00 | 29.57 |
| ATOM | 5121 | N   | TRP | 666 | 48.183 | 10.020 | 18.826 | 1.00 | 30.12 |
| ATOM | 5123 | CA  | TRP | 666 | 48.987 | 9.174  | 19.704 | 1.00 | 31.39 |
| ATOM | 5124 | CB  | TRP | 666 | 50.329 | 8.845  | 19.059 | 1.00 | 30.40 |
| ATOM | 5125 | CG  | TRP | 666 | 50.263 | 7.700  | 18.106 | 1.00 | 30.79 |
| ATOM | 5126 | CD2 | TRP | 666 | 49.701 | 7.719  | 16.785 | 1.00 | 30.22 |
| ATOM | 5127 | CE2 | TRP | 666 | 49.891 | 6.430  | 16.245 | 1.00 | 28.24 |
| ATOM | 5128 | CE3 | TRP | 666 | 49.067 | 8.702  | 16.012 | 1.00 | 30.60 |
| ATOM | 5129 | CD1 | TRP | 666 | 50.743 | 6.435  | 18.307 | 1.00 | 28.07 |
| ATOM | 5130 | NE1 | TRP | 666 | 50.522 | 5.670  | 17.187 | 1.00 | 29.15 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5132 | CZ2 | TRP | 666 | 49.462 | 6.107  | 14.954 | 1.00 | 29.38 |
| ATOM | 5133 | CZ3 | TRP | 666 | 48.640 | 8.374  | 14.726 | 1.00 | 31.27 |
| ATOM | 5134 | CH2 | TRP | 666 | 48.845 | 7.086  | 14.213 | 1.00 | 31.33 |
| ATOM | 5135 | C   | TRP | 666 | 49.242 | 9.902  | 21.026 | 1.00 | 33.92 |
| ATOM | 5136 | O   | TRP | 666 | 49.591 | 9.287  | 22.040 | 1.00 | 35.23 |
| ATOM | 5137 | N   | MET | 667 | 49.028 | 11.214 | 21.007 | 1.00 | 35.72 |
| ATOM | 5139 | CA  | MET | 667 | 49.260 | 12.065 | 22.159 | 1.00 | 36.43 |
| ATOM | 5140 | CB  | MET | 667 | 49.163 | 13.529 | 21.751 | 1.00 | 37.70 |
| ATOM | 5141 | CG  | MET | 667 | 50.510 | 14.194 | 21.574 | 1.00 | 40.10 |
| ATOM | 5142 | SD  | MET | 667 | 50.358 | 15.906 | 21.096 | 1.00 | 46.91 |
| ATOM | 5143 | CE  | MET | 667 | 50.914 | 15.810 | 19.386 | 1.00 | 40.40 |
| ATOM | 5144 | C   | MET | 667 | 48.389 | 11.839 | 23.378 | 1.00 | 38.36 |
| ATOM | 5145 | O   | MET | 667 | 47.186 | 11.646 | 23.273 | 1.00 | 39.53 |
| ATOM | 5146 | N   | ALA | 668 | 49.027 | 11.885 | 24.542 | 1.00 | 39.93 |
| ATOM | 5148 | CA  | ALA | 668 | 48.345 | 11.733 | 25.815 | 1.00 | 38.48 |
| ATOM | 5149 | CB  | ALA | 668 | 49.351 | 11.537 | 26.929 | 1.00 | 37.61 |
| ATOM | 5150 | C   | ALA | 668 | 47.603 | 13.038 | 26.014 | 1.00 | 39.48 |
| ATOM | 5151 | C   | ALA | 668 | 48.059 | 14.090 | 25.566 | 1.00 | 39.40 |
| ATOM | 5152 | N   | PRO | 669 | 46.474 | 13.001 | 26.731 | 1.00 | 42.22 |
| ATOM | 5153 | CD  | PRO | 669 | 45.842 | 11.827 | 27.355 | 1.00 | 42.77 |
| ATOM | 5154 | CA  | PRO | 669 | 45.677 | 14.204 | 26.980 | 1.00 | 43.91 |
| ATOM | 5155 | CB  | PRO | 669 | 44.609 | 13.698 | 27.948 | 1.00 | 44.49 |
| ATOM | 5156 | CG  | PRO | 669 | 44.421 | 12.279 | 27.499 | 1.00 | 43.59 |
| ATOM | 5157 | C   | PRO | 669 | 46.476 | 15.372 | 27.570 | 1.00 | 44.89 |
| ATOM | 5158 | O   | PRO | 669 | 46.394 | 16.497 | 27.075 | 1.00 | 45.48 |
| ATOM | 5159 | N   | GLU | 670 | 47.266 | 15.105 | 28.607 | 1.00 | 43.39 |
| ATOM | 5161 | CA  | GLU | 670 | 48.050 | 16.158 | 29.244 | 1.00 | 42.97 |
| ATOM | 5162 | CB  | GLU | 670 | 48.739 | 15.645 | 30.504 | 1.00 | 43.31 |
| ATOM | 5163 | CG  | GLU | 670 | 49.864 | 14.646 | 30.252 | 1.00 | 44.78 |
| ATOM | 5164 | CD  | GLU | 670 | 49.408 | 13.204 | 30.290 | 1.00 | 43.48 |
| ATOM | 5165 | OE1 | GLU | 670 | 50.225 | 12.331 | 30.639 | 1.00 | 41.85 |
| ATOM | 5166 | OE2 | GLU | 670 | 48.235 | 12.931 | 29.986 | 1.00 | 47.18 |
| ATOM | 5167 | C   | GLU | 670 | 49.090 | 16.798 | 28.333 | 1.00 | 43.18 |
| ATOM | 5168 | O   | GLU | 670 | 49.362 | 17.983 | 28.444 | 1.00 | 41.68 |
| ATOM | 5169 | N   | ALA | 671 | 49.677 | 16.008 | 27.440 | 1.00 | 44.65 |
| ATOM | 5171 | CA  | ALA | 671 | 50.686 | 16.512 | 26.513 | 1.00 | 44.44 |
| ATOM | 5172 | CB  | ALA | 671 | 51.412 | 15.347 | 25.841 | 1.00 | 40.17 |
| ATOM | 5173 | C   | ALA | 671 | 50.046 | 17.410 | 25.465 | 1.00 | 46.49 |
| ATOM | 5174 | O   | ALA | 671 | 50.558 | 18.484 | 25.148 | 1.00 | 45.70 |
| ATOM | 5175 | N   | LEU | 672 | 48.903 | 16.970 | 24.952 | 1.00 | 50.30 |
| ATOM | 5177 | CA  | LEU | 672 | 48.163 | 17.702 | 23.925 | 1.00 | 52.07 |
| ATOM | 5178 | CB  | LEU | 672 | 47.080 | 16.782 | 23.335 | 1.00 | 54.41 |
| ATOM | 5179 | CG  | LEU | 672 | 46.388 | 17.103 | 22.005 | 1.00 | 57.12 |
| ATOM | 5180 | CD1 | LEU | 672 | 47.404 | 17.316 | 20.912 | 1.00 | 57.65 |
| ATOM | 5181 | CD2 | LEU | 672 | 45.459 | 15.951 | 21.640 | 1.00 | 56.14 |
| ATOM | 5182 | C   | LEU | 672 | 47.535 | 18.964 | 24.512 | 1.00 | 52.42 |
| ATOM | 5183 | O   | LEU | 672 | 47.683 | 20.058 | 23.969 | 1.00 | 52.71 |
| ATOM | 5184 | N   | PHE | 673 | 46.863 | 18.803 | 25.645 | 1.00 | 52.74 |
| ATOM | 5186 | CA  | PHE | 673 | 46.203 | 19.911 | 26.314 | 1.00 | 54.32 |
| ATOM | 5187 | CB  | PHE | 673 | 44.995 | 19.394 | 27.104 | 1.00 | 52.92 |
| ATOM | 5188 | CG  | PHE | 673 | 43.987 | 18.646 | 26.259 | 1.00 | 52.38 |
| ATOM | 5189 | CD1 | PHE | 673 | 43.399 | 17.477 | 26.728 | 1.00 | 53.49 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5190 | CD2 | PHE | 673 | 43.624 | 19.109 | 24.999 | 1.00 | 51.61 |
| ATOM | 5191 | CE1 | PHE | 673 | 42.468 | 16.779 | 25.957 | 1.00 | 50.49 |
| ATOM | 5192 | CE2 | PHE | 673 | 42.698 | 18.420 | 24.229 | 1.00 | 50.91 |
| ATOM | 5193 | CZ  | PHE | 673 | 42.118 | 17.250 | 24.710 | 1.00 | 50.09 |
| ATOM | 5194 | C   | PHE | 673 | 47.138 | 20.732 | 27.220 | 1.00 | 56.29 |
| ATOM | 5195 | O   | PHE | 673 | 47.289 | 21.938 | 27.026 | 1.00 | 58.05 |
| ATOM | 5196 | N   | ASP | 674 | 47.808 | 20.076 | 28.165 | 1.00 | 56.38 |
| ATOM | 5198 | CA  | ASP | 674 | 48.703 | 20.772 | 29.104 | 1.00 | 56.12 |
| ATOM | 5199 | CB  | ASP | 674 | 48.644 | 20.101 | 30.485 | 1.00 | 53.81 |
| ATOM | 5200 | CG  | ASP | 674 | 47.299 | 20.234 | 31.152 | 1.00 | 52.48 |
| ATOM | 5201 | OD1 | ASP | 674 | 46.715 | 19.188 | 31.504 | 1.00 | 50.25 |
| ATOM | 5202 | OD2 | ASP | 674 | 46.844 | 21.384 | 31.337 | 1.00 | 51.16 |
| ATOM | 5203 | C   | ASP | 674 | 50.182 | 20.886 | 28.706 | 1.00 | 57.07 |
| ATOM | 5204 | O   | ASP | 674 | 51.010 | 21.273 | 29.541 | 1.00 | 56.00 |
| ATOM | 5205 | N   | ARG | 675 | 50.525 | 20.526 | 27.468 | 1.00 | 57.28 |
| ATOM | 5207 | CA  | ARG | 675 | 51.915 | 20.576 | 26.995 | 1.00 | 55.64 |
| ATOM | 5208 | CB  | ARG | 675 | 52.341 | 22.020 | 26.692 | 1.00 | 58.95 |
| ATOM | 5209 | CG  | ARG | 675 | 51.542 | 22.678 | 25.569 | 1.00 | 66.91 |
| ATOM | 5210 | CD  | ARG | 675 | 52.082 | 24.066 | 25.202 | 1.00 | 72.90 |
| ATOM | 5211 | NE  | ARG | 675 | 53.360 | 24.019 | 24.482 | 1.00 | 75.10 |
| ATOM | 5213 | CZ  | ARG | 675 | 54.096 | 25.089 | 24.181 | 1.00 | 73.61 |
| ATOM | 5214 | NH1 | ARG | 675 | 53.687 | 26.301 | 24.536 | 1.00 | 71.27 |
| ATOM | 5217 | NH2 | ARG | 675 | 55.250 | 24.943 | 23.540 | 1.00 | 72.12 |
| ATOM | 5220 | C   | ARG | 675 | 52.853 | 19.932 | 28.017 | 1.00 | 53.25 |
| ATOM | 5221 | O   | ARG | 675 | 53.988 | 20.366 | 28.211 | 1.00 | 52.13 |
| ATOM | 5222 | N   | ILE | 676 | 52.359 | 18.883 | 28.664 | 1.00 | 51.44 |
| ATOM | 5224 | CA  | ILE | 676 | 53.108 | 18.153 | 29.683 | 1.00 | 49.81 |
| ATOM | 5225 | CB  | ILE | 676 | 52.241 | 17.944 | 30.958 | 1.00 | 46.07 |
| ATOM | 5226 | CG2 | ILE | 676 | 52.804 | 16.844 | 31.856 | 1.00 | 40.98 |
| ATOM | 5227 | CG1 | ILE | 676 | 52.129 | 19.257 | 31.721 | 1.00 | 43.31 |
| ATOM | 5228 | CD1 | ILE | 676 | 51.324 | 19.147 | 32.963 | 1.00 | 45.02 |
| ATOM | 5229 | C   | ILE | 676 | 53.572 | 16.800 | 29.144 | 1.00 | 51.20 |
| ATOM | 5230 | O   | ILE | 676 | 52.770 | 15.892 | 28.951 | 1.00 | 52.37 |
| ATOM | 5231 | N   | TYR | 677 | 54.865 | 16.675 | 28.890 | 1.00 | 52.81 |
| ATOM | 5233 | CA  | TYR | 677 | 55.412 | 15.429 | 28.383 | 1.00 | 53.96 |
| ATOM | 5234 | CB  | TYR | 677 | 56.296 | 15.700 | 27.167 | 1.00 | 57.26 |
| ATOM | 5235 | CG  | TYR | 677 | 55.524 | 16.175 | 25.951 | 1.00 | 64.10 |
| ATOM | 5236 | CD1 | TYR | 677 | 55.229 | 17.532 | 25.762 | 1.00 | 65.60 |
| ATOM | 5237 | CE1 | TYR | 677 | 54.514 | 17.965 | 24.634 | 1.00 | 67.15 |
| ATOM | 5238 | CD2 | TYR | 677 | 55.085 | 15.263 | 24.985 | 1.00 | 66.29 |
| ATOM | 5239 | CE2 | TYR | 677 | 54.376 | 15.680 | 23.862 | 1.00 | 67.34 |
| ATOM | 5240 | CZ  | TYR | 677 | 54.095 | 17.028 | 23.692 | 1.00 | 69.24 |
| ATOM | 5241 | OH  | TYR | 677 | 53.399 | 17.414 | 22.573 | 1.00 | 73.55 |
| ATOM | 5243 | C   | TYR | 677 | 56.192 | 14.713 | 29.482 | 1.00 | 52.30 |
| ATOM | 5244 | O   | TYR | 677 | 57.053 | 15.309 | 30.124 | 1.00 | 53.73 |
| ATOM | 5245 | N   | THR | 678 | 55.830 | 13.461 | 29.748 | 1.00 | 48.95 |
| ATOM | 5247 | CA  | THR | 678 | 56.505 | 12.659 | 30.760 | 1.00 | 45.99 |
| ATOM | 5248 | CB  | THR | 678 | 55.729 | 12.634 | 32.107 | 1.00 | 46.04 |
| ATOM | 5249 | OG1 | THR | 678 | 54.663 | 11.676 | 32.046 | 1.00 | 49.79 |
| ATOM | 5251 | CG2 | THR | 678 | 55.160 | 14.010 | 32.429 | 1.00 | 45.58 |
| ATOM | 5252 | C   | THR | 678 | 56.656 | 11.221 | 30.261 | 1.00 | 43.81 |
| ATOM | 5253 | O   | THR | 678 | 56.231 | 10.888 | 29.158 | 1.00 | 45.12 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5254 | N   | HIS | 679 | 57.250 | 10.359 | 31.076 | 1.00 | 41.50 |
| ATOM | 5256 | CA  | HIS | 679 | 57.414 | 8.971  | 30.687 | 1.00 | 38.39 |
| ATOM | 5257 | CB  | HIS | 679 | 58.390 | 8.253  | 31.603 | 1.00 | 38.62 |
| ATOM | 5258 | CG  | HIS | 679 | 59.798 | 8.770  | 31.524 | 1.00 | 41.51 |
| ATOM | 5259 | CD2 | HIS | 679 | 60.456 | 9.690  | 32.273 | 1.00 | 40.12 |
| ATOM | 5260 | ND1 | HIS | 679 | 60.715 | 8.296  | 30.613 | 1.00 | 41.18 |
| ATOM | 5262 | CE1 | HIS | 679 | 61.880 | 8.892  | 30.806 | 1.00 | 39.44 |
| ATOM | 5263 | NE2 | HIS | 679 | 61.747 | 9.742  | 31.807 | 1.00 | 41.37 |
| ATOM | 5265 | C   | HIS | 679 | 56.068 | 8.279  | 30.720 | 1.00 | 39.57 |
| ATOM | 5266 | O   | HIS | 679 | 55.909 | 7.215  | 30.137 | 1.00 | 41.93 |
| ATOM | 5267 | N   | GLN | 680 | 55.108 | 8.863  | 31.429 | 1.00 | 39.84 |
| ATOM | 5269 | CA  | GLN | 680 | 53.773 | 8.290  | 31.483 | 1.00 | 38.92 |
| ATOM | 5270 | CB  | GLN | 680 | 53.021 | 8.705  | 32.751 | 1.00 | 38.21 |
| ATOM | 5271 | CG  | GLN | 680 | 53.518 | 8.005  | 34.022 | 1.00 | 42.17 |
| ATOM | 5272 | CD  | GLN | 680 | 53.651 | 6.477  | 33.879 | 1.00 | 43.35 |
| ATOM | 5273 | OE1 | GLN | 680 | 52.686 | 5.737  | 34.056 | 1.00 | 44.05 |
| ATOM | 5274 | NE2 | GLN | 680 | 54.860 | 6.010  | 33.564 | 1.00 | 37.17 |
| ATOM | 5277 | C   | GLN | 680 | 53.012 | 8.674  | 30.221 | 1.00 | 39.33 |
| ATOM | 5278 | O   | GLN | 680 | 52.220 | 7.883  | 29.709 | 1.00 | 40.26 |
| ATOM | 5279 | N   | SER | 681 | 53.299 | 9.854  | 29.673 | 1.00 | 38.00 |
| ATOM | 5281 | CA  | SER | 681 | 52.636 | 10.251 | 28.441 | 1.00 | 37.44 |
| ATOM | 5282 | CB  | SER | 681 | 52.963 | 11.698 | 28.078 | 1.00 | 37.67 |
| ATOM | 5283 | OG  | SER | 681 | 54.349 | 11.937 | 28.102 | 1.00 | 38.03 |
| ATOM | 5285 | C   | SER | 681 | 53.095 | 9.278  | 27.356 | 1.00 | 38.28 |
| ATOM | 5286 | O   | SER | 681 | 52.302 | 8.866  | 26.510 | 1.00 | 39.41 |
| ATOM | 5287 | N   | ASP | 682 | 54.362 | 8.866  | 27.431 | 1.00 | 36.81 |
| ATOM | 5289 | CA  | ASP | 682 | 54.920 | 7.888  | 26.495 | 1.00 | 36.41 |
| ATOM | 5290 | CB  | ASP | 682 | 56.404 | 7.655  | 26.765 | 1.00 | 37.18 |
| ATOM | 5291 | CG  | ASP | 682 | 57.309 | 8.584  | 25.968 | 1.00 | 40.08 |
| ATOM | 5292 | OD1 | ASP | 682 | 58.528 | 8.317  | 25.959 | 1.00 | 41.94 |
| ATOM | 5293 | OD2 | ASP | 682 | 56.824 | 9.565  | 25.352 | 1.00 | 39.55 |
| ATOM | 5294 | C   | ASP | 682 | 54.180 | 6.561  | 26.645 | 1.00 | 36.93 |
| ATOM | 5295 | O   | ASP | 682 | 54.005 | 5.818  | 25.675 | 1.00 | 38.23 |
| ATOM | 5296 | N   | VAL | 683 | 53.742 | 6.268  | 27.866 | 1.00 | 36.33 |
| ATOM | 5298 | CA  | VAL | 683 | 53.000 | 5.040  | 28.143 | 1.00 | 36.29 |
| ATOM | 5299 | CB  | VAL | 683 | 52.834 | 4.820  | 29.683 | 1.00 | 35.29 |
| ATOM | 5300 | CG1 | VAL | 683 | 51.900 | 3.653  | 29.989 | 1.00 | 34.98 |
| ATOM | 5301 | CG2 | VAL | 683 | 54.198 | 4.546  | 30.312 | 1.00 | 30.55 |
| ATOM | 5302 | C   | VAL | 683 | 51.648 | 5.067  | 27.392 | 1.00 | 35.21 |
| ATOM | 5303 | O   | VAL | 683 | 51.223 | 4.050  | 26.845 | 1.00 | 32.81 |
| ATOM | 5304 | N   | TRP | 684 | 51.027 | 6.245  | 27.309 | 1.00 | 34.49 |
| ATOM | 5306 | CA  | TRP | 684 | 49.759 | 6.412  | 26.602 | 1.00 | 36.39 |
| ATOM | 5307 | CB  | TRP | 684 | 49.200 | 7.825  | 26.811 | 1.00 | 39.30 |
| ATOM | 5308 | CG  | TRP | 684 | 48.006 | 8.174  | 25.947 | 1.00 | 41.47 |
| ATOM | 5309 | CD2 | TRP | 684 | 46.651 | 8.381  | 26.384 | 1.00 | 42.41 |
| ATOM | 5310 | CE2 | TRP | 684 | 45.896 | 8.744  | 25.247 | 1.00 | 41.76 |
| ATOM | 5311 | CE3 | TRP | 684 | 46.004 | 8.298  | 27.627 | 1.00 | 42.06 |
| ATOM | 5312 | CD1 | TRP | 684 | 48.010 | 8.410  | 24.597 | 1.00 | 40.55 |
| ATOM | 5313 | NE1 | TRP | 684 | 46.749 | 8.756  | 24.175 | 1.00 | 42.32 |
| ATOM | 5315 | CZ2 | TRP | 684 | 44.522 | 9.022  | 25.315 | 1.00 | 41.35 |
| ATOM | 5316 | CZ3 | TRP | 684 | 44.638 | 8.576  | 27.692 | 1.00 | 41.99 |
| ATOM | 5317 | CH2 | TRP | 684 | 43.917 | 8.933  | 26.541 | 1.00 | 41.07 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5318 | C   | TRP | 684 | 49.964 | 6.125  | 25.115 | 1.00 | 36.12 |
| ATOM | 5319 | O   | TRP | 684 | 49.152 | 5.410  | 24.511 | 1.00 | 38.69 |
| ATOM | 5320 | N   | SER | 685 | 51.029 | 6.690  | 24.534 | 1.00 | 33.48 |
| ATOM | 5322 | CA  | SER | 685 | 51.395 | 6.491  | 23.130 | 1.00 | 26.49 |
| ATOM | 5323 | CB  | SER | 685 | 52.636 | 7.300  | 22.802 | 1.00 | 23.40 |
| ATOM | 5324 | OG  | SER | 685 | 52.403 | 8.688  | 22.992 | 1.00 | 30.31 |
| ATOM | 5326 | C   | SER | 685 | 51.665 | 5.015  | 22.859 | 1.00 | 26.25 |
| ATOM | 5327 | O   | SER | 685 | 51.377 | 4.510  | 21.782 | 1.00 | 28.78 |
| ATOM | 5328 | N   | PHE | 686 | 52.214 | 4.319  | 23.846 | 1.00 | 28.14 |
| ATOM | 5330 | CA  | PHE | 686 | 52.470 | 2.884  | 23.727 | 1.00 | 28.53 |
| ATOM | 5331 | CB  | PHE | 686 | 53.245 | 2.399  | 24.947 | 1.00 | 27.34 |
| ATOM | 5332 | CG  | PHE | 686 | 53.567 | 0.937  | 24.917 | 1.00 | 29.91 |
| ATOM | 5333 | CD1 | PHE | 686 | 54.424 | 0.419  | 23.942 | 1.00 | 29.23 |
| ATOM | 5334 | CD2 | PHE | 686 | 53.016 | 0.075  | 25.861 | 1.00 | 28.28 |
| ATOM | 5335 | CE1 | PHE | 686 | 54.725 | -0.936 | 23.908 | 1.00 | 27.65 |
| ATOM | 5336 | CE2 | PHE | 686 | 53.307 | -1.274 | 25.840 | 1.00 | 27.18 |
| ATOM | 5337 | CZ  | PHE | 686 | 54.166 | -1.787 | 24.861 | 1.00 | 30.06 |
| ATOM | 5338 | C   | PHE | 686 | 51.129 | 2.117  | 23.618 | 1.00 | 31.42 |
| ATOM | 5339 | O   | PHE | 686 | 51.041 | 1.096  | 22.930 | 1.00 | 29.05 |
| ATOM | 5340 | N   | GLY | 687 | 50.093 | 2.623  | 24.298 | 1.00 | 31.18 |
| ATOM | 5342 | CA  | GLY | 687 | 48.783 | 2.000  | 24.256 | 1.00 | 32.16 |
| ATOM | 5343 | C   | GLY | 687 | 48.276 | 2.026  | 22.825 | 1.00 | 35.09 |
| ATOM | 5344 | O   | GLY | 687 | 47.805 | 1.011  | 22.289 | 1.00 | 36.38 |
| ATOM | 5345 | N   | VAL | 688 | 48.378 | 3.188  | 22.186 | 1.00 | 33.72 |
| ATOM | 5347 | CA  | VAL | 688 | 47.949 | 3.307  | 20.808 | 1.00 | 30.28 |
| ATOM | 5348 | CB  | VAL | 688 | 47.996 | 4.761  | 20.322 | 1.00 | 28.62 |
| ATOM | 5349 | CG1 | VAL | 688 | 47.433 | 4.862  | 18.905 | 1.00 | 26.79 |
| ATOM | 5350 | CG2 | VAL | 688 | 47.202 | 5.645  | 21.275 | 1.00 | 26.40 |
| ATOM | 5351 | C   | VAL | 688 | 48.823 | 2.406  | 19.930 | 1.00 | 30.01 |
| ATOM | 5352 | O   | VAL | 688 | 48.324 | 1.782  | 18.989 | 1.00 | 30.37 |
| ATOM | 5353 | N   | LEU | 689 | 50.108 | 2.282  | 20.273 | 1.00 | 29.76 |
| ATOM | 5355 | CA  | LEU | 689 | 51.022 | 1.418  | 19.510 | 1.00 | 29.37 |
| ATOM | 5356 | CB  | LEU | 689 | 52.476 | 1.577  | 19.982 | 1.00 | 25.78 |
| ATOM | 5357 | CG  | LEU | 689 | 53.564 | 0.944  | 19.097 | 1.00 | 23.00 |
| ATOM | 5358 | CD1 | LEU | 689 | 54.855 | 1.741  | 19.153 | 1.00 | 24.44 |
| ATOM | 5359 | CD2 | LEU | 689 | 53.823 | -0.471 | 19.479 | 1.00 | 21.63 |
| ATOM | 5360 | C   | LEU | 689 | 50.583 | -0.043 | 19.634 | 1.00 | 29.98 |
| ATOM | 5361 | O   | LEU | 689 | 50.708 | -0.806 | 18.678 | 1.00 | 28.75 |
| ATOM | 5362 | N   | LEU | 690 | 50.048 | -0.409 | 20.803 | 1.00 | 32.38 |
| ATOM | 5364 | CA  | LEU | 690 | 49.562 | -1.764 | 21.060 | 1.00 | 32.66 |
| ATOM | 5365 | CB  | LEU | 690 | 49.114 | -1.929 | 22.517 | 1.00 | 32.33 |
| ATOM | 5366 | CG  | LEU | 690 | 50.107 | -2.192 | 23.658 | 1.00 | 32.00 |
| ATOM | 5367 | CD1 | LEU | 690 | 49.330 | -2.201 | 24.962 | 1.00 | 35.74 |
| ATOM | 5368 | CD2 | LEU | 690 | 50.834 | -3.513 | 23.475 | 1.00 | 30.76 |
| ATOM | 5369 | C   | LEU | 690 | 48.369 | -2.018 | 20.156 | 1.00 | 33.29 |
| ATOM | 5370 | O   | LEU | 690 | 48.248 | -3.079 | 19.550 | 1.00 | 35.08 |
| ATOM | 5371 | N   | TRP | 691 | 47.490 | -1.026 | 20.065 | 1.00 | 34.28 |
| ATOM | 5373 | CA  | TRP | 691 | 46.304 | -1.114 | 19.221 | 1.00 | 33.79 |
| ATOM | 5374 | CB  | TRP | 691 | 45.483 | 0.172  | 19.364 | 1.00 | 32.68 |
| ATOM | 5375 | CG  | TRP | 691 | 44.147 | 0.144  | 18.669 | 1.00 | 31.23 |
| ATOM | 5376 | CD2 | TRP | 691 | 43.888 | 0.490  | 17.312 | 1.00 | 28.11 |
| ATOM | 5377 | CE2 | TRP | 691 | 42.506 | 0.310  | 17.089 | 1.00 | 29.96 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5378 | CE3 | TRP | 691 | 44.686 | 0.949  | 16.257 | 1.00 | 28.70 |
| ATOM | 5379 | CD1 | TRP | 691 | 42.936 | -0.225 | 19.208 | 1.00 | 29.37 |
| ATOM | 5380 | NE1 | TRP | 691 | 41.951 | -0.130 | 18.265 | 1.00 | 30.89 |
| ATOM | 5382 | CZ2 | TRP | 691 | 41.909 | 0.555  | 15.845 | 1.00 | 29.50 |
| ATOM | 5383 | CZ3 | TRP | 691 | 44.093 | 1.194  | 15.021 | 1.00 | 27.43 |
| ATOM | 5384 | CH2 | TRP | 691 | 42.719 | 1.002  | 14.830 | 1.00 | 29.27 |
| ATOM | 5385 | C   | TRP | 691 | 46.744 | -1.319 | 17.763 | 1.00 | 34.12 |
| ATOM | 5386 | O   | TRP | 691 | 46.139 | -2.088 | 17.029 | 1.00 | 33.88 |
| ATOM | 5387 | N   | GLU | 692 | 47.817 | -0.636 | 17.366 | 1.00 | 36.37 |
| ATOM | 5389 | CA  | GLU | 692 | 48.355 | -0.723 | 16.010 | 1.00 | 35.35 |
| ATOM | 5390 | CB  | GLU | 692 | 49.532 | 0.233  | 15.826 | 1.00 | 31.75 |
| ATOM | 5391 | CG  | GLU | 692 | 49.138 | 1.694  | 15.746 | 1.00 | 32.63 |
| ATOM | 5392 | CD  | GLU | 692 | 50.318 | 2.585  | 15.403 | 1.00 | 35.28 |
| ATOM | 5393 | OE1 | GLU | 692 | 51.150 | 2.847  | 16.301 | 1.00 | 37.81 |
| ATOM | 5394 | OE2 | GLU | 692 | 50.430 | 3.017  | 14.237 | 1.00 | 34.85 |
| ATOM | 5395 | C   | GLU | 692 | 48.810 | -2.118 | 15.658 | 1.00 | 35.71 |
| ATOM | 5396 | O   | GLU | 692 | 48.589 | -2.570 | 14.544 | 1.00 | 37.26 |
| ATOM | 5397 | N   | ILE | 693 | 49.439 | -2.798 | 16.610 | 1.00 | 35.05 |
| ATOM | 5399 | CA  | ILE | 693 | 49.944 | -4.153 | 16.396 | 1.00 | 35.00 |
| ATOM | 5400 | CB  | ILE | 693 | 50.843 | -4.608 | 17.575 | 1.00 | 35.88 |
| ATOM | 5401 | CG2 | ILE | 693 | 51.275 | -6.064 | 17.400 | 1.00 | 36.03 |
| ATOM | 5402 | CG1 | ILE | 693 | 52.081 | -3.711 | 17.669 | 1.00 | 34.66 |
| ATOM | 5403 | CD1 | ILE | 693 | 52.814 | -3.874 | 18.943 | 1.00 | 35.52 |
| ATOM | 5404 | C   | ILE | 693 | 48.810 | -5.153 | 16.232 | 1.00 | 34.29 |
| ATOM | 5405 | O   | ILE | 693 | 48.790 | -5.943 | 15.281 | 1.00 | 33.66 |
| ATOM | 5406 | N   | PHE | 694 | 47.837 | -5.079 | 17.127 | 1.00 | 34.44 |
| ATOM | 5408 | CA  | PHE | 694 | 46.722 | -5.999 | 17.082 | 1.00 | 35.63 |
| ATOM | 5409 | CB  | PHE | 694 | 46.156 | -6.167 | 18.490 | 1.00 | 35.26 |
| ATOM | 5410 | CG  | PHE | 694 | 47.158 | -6.787 | 19.428 | 1.00 | 35.26 |
| ATOM | 5411 | CD1 | PHE | 694 | 47.796 | -6.017 | 20.389 | 1.00 | 33.07 |
| ATOM | 5412 | CD2 | PHE | 694 | 47.574 | -8.111 | 19.237 | 1.00 | 31.74 |
| ATOM | 5413 | CE1 | PHE | 694 | 48.837 | -5.539 | 21.137 | 1.00 | 31.01 |
| ATOM | 5414 | CE2 | PHE | 694 | 48.614 | -8.643 | 19.982 | 1.00 | 31.64 |
| ATOM | 5415 | CZ  | PHE | 694 | 49.254 | -7.855 | 20.934 | 1.00 | 31.84 |
| ATOM | 5416 | C   | PHE | 694 | 45.688 | -5.771 | 15.986 | 1.00 | 36.62 |
| ATOM | 5417 | O   | PHE | 694 | 44.844 | -6.632 | 15.729 | 1.00 | 38.73 |
| ATOM | 5418 | N   | THR | 695 | 45.781 | -4.626 | 15.313 | 1.00 | 35.76 |
| ATOM | 5420 | CA  | THR | 695 | 44.898 | -4.331 | 14.191 | 1.00 | 34.86 |
| ATOM | 5421 | CB  | THR | 695 | 44.245 | -2.929 | 14.298 | 1.00 | 32.81 |
| ATOM | 5422 | OG1 | THR | 695 | 45.246 | -1.909 | 14.211 | 1.00 | 31.61 |
| ATOM | 5424 | CG2 | THR | 695 | 43.497 | -2.795 | 15.603 | 1.00 | 29.90 |
| ATOM | 5425 | C   | THR | 695 | 45.766 | -4.426 | 12.934 | 1.00 | 35.95 |
| ATOM | 5426 | O   | THR | 695 | 45.333 | -4.064 | 11.841 | 1.00 | 38.88 |
| ATOM | 5427 | N   | LEU | 696 | 46.993 | -4.919 | 13.119 | 1.00 | 34.68 |
| ATOM | 5429 | CA  | LEU | 696 | 47.979 | -5.100 | 12.053 | 1.00 | 32.84 |
| ATOM | 5430 | CB  | LEU | 696 | 47.622 | -6.294 | 11.161 | 1.00 | 32.65 |
| ATOM | 5431 | CG  | LEU | 696 | 47.493 | -7.657 | 11.838 | 1.00 | 30.89 |
| ATOM | 5432 | CD1 | LEU | 696 | 47.315 | -8.734 | 10.785 | 1.00 | 31.30 |
| ATOM | 5433 | CD2 | LEU | 696 | 48.718 | -7.939 | 12.659 | 1.00 | 30.76 |
| ATOM | 5434 | C   | LEU | 696 | 48.280 | -3.872 | 11.197 | 1.00 | 32.43 |
| ATOM | 5435 | O   | LEU | 696 | 48.259 | -3.931 | 9.965  | 1.00 | 31.48 |
| ATOM | 5436 | N   | GLY | 697 | 48.597 | -2.768 | 11.867 | 1.00 | 33.65 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5438 | CA  | GLY | 697 | 48.940 | -1.529 | 11.188 | 1.00 | 32.78 |
| ATOM | 5439 | C   | GLY | 697 | 47.742 | -0.641 | 10.960 | 1.00 | 33.06 |
| ATOM | 5440 | O   | GLY | 697 | 47.728 | 0.172  | 10.048 | 1.00 | 34.74 |
| ATOM | 5441 | N   | GLY | 698 | 46.719 | -0.798 | 11.782 | 1.00 | 35.53 |
| ATOM | 5443 | CA  | GLY | 698 | 45.531 | 0.009  | 11.612 | 1.00 | 36.87 |
| ATOM | 5444 | C   | GLY | 698 | 45.771 | 1.496  | 11.753 | 1.00 | 34.92 |
| ATOM | 5445 | O   | GLY | 698 | 46.779 | 1.926  | 12.299 | 1.00 | 34.08 |
| ATOM | 5446 | N   | SER | 699 | 44.814 | 2.271  | 11.265 | 1.00 | 36.45 |
| ATOM | 5448 | CA  | SER | 699 | 44.858 | 3.725  | 11.318 | 1.00 | 35.36 |
| ATOM | 5449 | CB  | SER | 699 | 44.363 | 4.290  | 9.995  | 1.00 | 34.58 |
| ATOM | 5450 | OG  | SER | 699 | 44.126 | 5.684  | 10.087 | 1.00 | 41.43 |
| ATOM | 5452 | C   | SER | 699 | 43.927 | 4.146  | 12.451 | 1.00 | 36.53 |
| ATOM | 5453 | O   | SER | 699 | 42.734 | 3.812  | 12.438 | 1.00 | 37.58 |
| ATOM | 5454 | N   | PRO | 700 | 44.471 | 4.799  | 13.491 | 1.00 | 36.03 |
| ATOM | 5455 | CD  | PRO | 700 | 45.896 | 5.028  | 13.776 | 1.00 | 34.58 |
| ATOM | 5456 | CA  | PRO | 700 | 43.630 | 5.228  | 14.611 | 1.00 | 35.47 |
| ATOM | 5457 | CB  | PRO | 700 | 44.655 | 5.573  | 15.694 | 1.00 | 34.59 |
| ATOM | 5458 | CG  | PRO | 700 | 45.840 | 5.990  | 14.919 | 1.00 | 34.18 |
| ATOM | 5459 | C   | PRO | 700 | 42.742 | 6.411  | 14.247 | 1.00 | 34.66 |
| ATOM | 5460 | O   | PRO | 700 | 43.194 | 7.363  | 13.616 | 1.00 | 34.39 |
| ATOM | 5461 | N   | TYR | 701 | 41.462 | 6.293  | 14.588 | 1.00 | 34.11 |
| ATOM | 5463 | CA  | TYR | 701 | 40.459 | 7.324  | 14.338 | 1.00 | 33.11 |
| ATOM | 5464 | CB  | TYR | 701 | 40.713 | 8.548  | 15.225 | 1.00 | 38.13 |
| ATOM | 5465 | CG  | TYR | 701 | 40.552 | 8.272  | 16.706 | 1.00 | 43.52 |
| ATOM | 5466 | CD1 | TYR | 701 | 41.539 | 8.637  | 17.616 | 1.00 | 44.79 |
| ATOM | 5467 | CE1 | TYR | 701 | 41.387 | 8.391  | 18.978 | 1.00 | 49.99 |
| ATOM | 5468 | CD2 | TYR | 701 | 39.405 | 7.647  | 17.197 | 1.00 | 47.59 |
| ATOM | 5469 | CE2 | TYR | 701 | 39.245 | 7.395  | 18.552 | 1.00 | 49.15 |
| ATOM | 5470 | CZ  | TYR | 701 | 40.237 | 7.770  | 19.444 | 1.00 | 50.84 |
| ATOM | 5471 | OH  | TYR | 701 | 40.091 | 7.539  | 20.804 | 1.00 | 54.00 |
| ATOM | 5473 | C   | TYR | 701 | 40.389 | 7.736  | 12.877 | 1.00 | 30.95 |
| ATOM | 5474 | O   | TYR | 701 | 40.597 | 8.900  | 12.534 | 1.00 | 30.64 |
| ATOM | 5475 | N   | PRO | 702 | 40.096 | 6.773  | 11.985 | 1.00 | 30.06 |
| ATOM | 5476 | CD  | PRO | 702 | 39.887 | 5.336  | 12.192 | 1.00 | 25.47 |
| ATOM | 5477 | CA  | PRO | 702 | 40.014 | 7.112  | 10.561 | 1.00 | 29.36 |
| ATOM | 5478 | CB  | PRO | 702 | 39.836 | 5.744  | 9.899  | 1.00 | 25.86 |
| ATOM | 5479 | CG  | PRO | 702 | 39.185 | 4.946  | 10.929 | 1.00 | 24.42 |
| ATOM | 5480 | C   | PRO | 702 | 38.859 | 8.045  | 10.256 | 1.00 | 31.49 |
| ATOM | 5481 | O   | PRO | 702 | 37.716 | 7.794  | 10.654 | 1.00 | 33.50 |
| ATOM | 5482 | N   | GLY | 703 | 39.194 | 9.151  | 9.592  | 1.00 | 30.85 |
| ATOM | 5484 | CA  | GLY | 703 | 38.210 | 10.149 | 9.212  | 1.00 | 27.67 |
| ATOM | 5485 | C   | GLY | 703 | 37.985 | 11.230 | 10.250 | 1.00 | 27.39 |
| ATOM | 5486 | O   | GLY | 703 | 37.270 | 12.194 | 9.981  | 1.00 | 26.56 |
| ATOM | 5487 | N   | VAL | 704 | 38.627 | 11.100 | 11.412 | 1.00 | 27.05 |
| ATOM | 5489 | CA  | VAL | 704 | 38.466 | 12.053 | 12.505 | 1.00 | 28.50 |
| ATOM | 5490 | CB  | VAL | 704 | 38.576 | 11.364 | 13.876 | 1.00 | 28.95 |
| ATOM | 5491 | CG1 | VAL | 704 | 38.509 | 12.397 | 14.990 | 1.00 | 29.36 |
| ATOM | 5492 | CG2 | VAL | 704 | 37.475 | 10.338 | 14.045 | 1.00 | 29.64 |
| ATOM | 5493 | C   | VAL | 704 | 39.473 | 13.194 | 12.493 | 1.00 | 30.95 |
| ATOM | 5494 | O   | VAL | 704 | 40.669 | 12.977 | 12.661 | 1.00 | 32.90 |
| ATOM | 5495 | N   | PRO | 705 | 39.001 | 14.428 | 12.269 | 1.00 | 31.09 |
| ATOM | 5496 | CD  | PRO | 705 | 37.682 | 14.795 | 11.728 | 1.00 | 31.49 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5497 | CA  | PRO | 705 | 39.926 | 15.561 | 12.255 | 1.00 | 29.66 |
| ATOM | 5498 | CB  | PRO | 705 | 39.152 | 16.618 | 11.477 | 1.00 | 30.16 |
| ATOM | 5499 | CG  | PRO | 705 | 37.720 | 16.289 | 11.778 | 1.00 | 33.76 |
| ATOM | 5500 | C   | PRO | 705 | 40.334 | 16.028 | 13.654 | 1.00 | 29.25 |
| ATOM | 5501 | O   | PRO | 705 | 39.693 | 15.695 | 14.659 | 1.00 | 24.77 |
| ATOM | 5502 | N   | VAL | 706 | 41.396 | 16.828 | 13.690 | 1.00 | 32.40 |
| ATOM | 5504 | CA  | VAL | 706 | 41.976 | 17.355 | 14.929 | 1.00 | 36.51 |
| ATOM | 5505 | CB  | VAL | 706 | 43.023 | 18.450 | 14.629 | 1.00 | 36.79 |
| ATOM | 5506 | CG1 | VAL | 706 | 43.680 | 18.903 | 15.914 | 1.00 | 37.79 |
| ATOM | 5507 | CG2 | VAL | 706 | 44.058 | 17.942 | 13.653 | 1.00 | 37.26 |
| ATOM | 5508 | C   | VAL | 706 | 40.977 | 17.915 | 15.943 | 1.00 | 38.21 |
| ATOM | 5509 | O   | VAL | 706 | 41.052 | 17.600 | 17.130 | 1.00 | 37.65 |
| ATOM | 5510 | N   | GLU | 707 | 40.060 | 18.754 | 15.467 | 1.00 | 40.27 |
| ATOM | 5512 | CA  | GLU | 707 | 39.045 | 19.360 | 16.324 | 1.00 | 40.57 |
| ATOM | 5513 | CB  | GLU | 707 | 38.186 | 20.324 | 15.499 | 1.00 | 40.56 |
| ATOM | 5514 | C   | GLU | 707 | 38.164 | 18.288 | 16.958 | 1.00 | 41.60 |
| ATOM | 5515 | O   | GLU | 707 | 37.871 | 18.323 | 18.158 | 1.00 | 41.79 |
| ATOM | 5516 | N   | GLU | 708 | 37.784 | 17.311 | 16.143 | 1.00 | 42.54 |
| ATOM | 5518 | CA  | GLU | 708 | 36.947 | 16.210 | 16.576 | 1.00 | 44.09 |
| ATOM | 5519 | CB  | GLU | 708 | 36.509 | 15.398 | 15.367 | 1.00 | 47.61 |
| ATOM | 5520 | CG  | GLU | 708 | 35.687 | 16.219 | 14.381 | 1.00 | 50.42 |
| ATOM | 5521 | CD  | GLU | 708 | 34.511 | 16.891 | 15.042 | 1.00 | 55.51 |
| ATOM | 5522 | OE1 | GLU | 708 | 33.856 | 16.249 | 15.899 | 1.00 | 58.91 |
| ATOM | 5523 | OE2 | GLU | 708 | 34.244 | 18.067 | 14.714 | 1.00 | 60.06 |
| ATOM | 5524 | C   | GLU | 708 | 37.661 | 15.338 | 17.598 | 1.00 | 44.63 |
| ATOM | 5525 | O   | GLU | 708 | 37.058 | 14.893 | 18.585 | 1.00 | 45.12 |
| ATOM | 5526 | N   | LEU | 709 | 38.960 | 15.141 | 17.390 | 1.00 | 43.72 |
| ATOM | 5528 | CA  | LEU | 709 | 39.768 | 14.346 | 18.312 | 1.00 | 39.85 |
| ATOM | 5529 | CB  | LEU | 709 | 41.212 | 14.243 | 17.823 | 1.00 | 34.99 |
| ATOM | 5530 | CG  | LEU | 709 | 42.037 | 13.359 | 18.756 | 1.00 | 31.80 |
| ATOM | 5531 | CD1 | LEU | 709 | 41.619 | 11.918 | 18.598 | 1.00 | 29.20 |
| ATOM | 5532 | CD2 | LEU | 709 | 43.495 | 13.533 | 18.454 | 1.00 | 31.19 |
| ATOM | 5533 | C   | LEU | 709 | 39.751 | 15.001 | 19.683 | 1.00 | 39.26 |
| ATOM | 5534 | O   | LEU | 709 | 39.646 | 14.317 | 20.714 | 1.00 | 37.71 |
| ATOM | 5535 | N   | PHE | 710 | 39.872 | 16.327 | 19.691 | 1.00 | 38.62 |
| ATOM | 5537 | CA  | PHE | 710 | 39.862 | 17.068 | 20.942 | 1.00 | 41.82 |
| ATOM | 5538 | CB  | PHE | 710 | 40.016 | 18.567 | 20.688 | 1.00 | 42.02 |
| ATOM | 5539 | CG  | PHE | 710 | 41.383 | 18.958 | 20.206 | 1.00 | 43.81 |
| ATOM | 5540 | CD1 | PHE | 710 | 42.441 | 18.043 | 20.242 | 1.00 | 47.07 |
| ATOM | 5541 | CD2 | PHE | 710 | 41.621 | 20.234 | 19.718 | 1.00 | 42.91 |
| ATOM | 5542 | CE1 | PHE | 710 | 43.716 | 18.401 | 19.793 | 1.00 | 49.22 |
| ATOM | 5543 | CE2 | PHE | 710 | 42.890 | 20.602 | 19.267 | 1.00 | 46.73 |
| ATOM | 5544 | CZ  | PHE | 710 | 43.942 | 19.681 | 19.307 | 1.00 | 48.40 |
| ATOM | 5545 | C   | PHE | 710 | 38.568 | 16.787 | 21.698 | 1.00 | 43.80 |
| ATOM | 5546 | O   | PHE | 710 | 38.593 | 16.502 | 22.904 | 1.00 | 44.54 |
| ATOM | 5547 | N   | LYS | 711 | 37.452 | 16.790 | 20.968 | 1.00 | 44.15 |
| ATOM | 5549 | CA  | LYS | 711 | 36.148 | 16.539 | 21.569 | 1.00 | 42.60 |
| ATOM | 5550 | CB  | LYS | 711 | 35.029 | 16.855 | 20.577 | 1.00 | 44.35 |
| ATOM | 5551 | CG  | LYS | 711 | 33.661 | 16.781 | 21.200 | 1.00 | 48.05 |
| ATOM | 5552 | CD  | LYS | 711 | 32.560 | 17.205 | 20.263 | 1.00 | 49.23 |
| ATOM | 5553 | CE  | LYS | 711 | 31.212 | 16.804 | 20.855 | 1.00 | 50.61 |
| ATOM | 5554 | NZ  | LYS | 711 | 30.078 | 17.204 | 19.987 | 1.00 | 56.56 |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5558 | C   | LYS | 711 | 36.045 | 15.105 | 22.084 | 1.00 | 41.50 |
| ATOM | 5559 | O   | LYS | 711 | 35.589 | 14.875 | 23.202 | 1.00 | 41.06 |
| ATOM | 5560 | N   | LEU | 712 | 36.489 | 14.144 | 21.282 | 1.00 | 41.61 |
| ATOM | 5562 | CA  | LEU | 712 | 36.463 | 12.737 | 21.687 | 1.00 | 43.22 |
| ATOM | 5563 | CB  | LEU | 712 | 37.070 | 11.841 | 20.600 | 1.00 | 41.69 |
| ATOM | 5564 | CG  | LEU | 712 | 36.246 | 11.404 | 19.397 | 1.00 | 38.07 |
| ATOM | 5565 | CD1 | LEU | 712 | 37.071 | 10.460 | 18.527 | 1.00 | 34.55 |
| ATOM | 5566 | CD2 | LEU | 712 | 34.990 | 10.714 | 19.891 | 1.00 | 37.28 |
| ATOM | 5567 | C   | LEU | 712 | 37.253 | 12.536 | 22.982 | 1.00 | 43.94 |
| ATOM | 5568 | O   | LEU | 712 | 36.804 | 11.832 | 23.900 | 1.00 | 41.71 |
| ATOM | 5569 | N   | LEU | 713 | 38.444 | 13.129 | 23.029 | 1.00 | 45.26 |
| ATOM | 5571 | CA  | LEU | 713 | 39.318 | 13.022 | 24.191 | 1.00 | 46.47 |
| ATOM | 5572 | CB  | LEU | 713 | 40.647 | 13.728 | 23.925 | 1.00 | 46.32 |
| ATOM | 5573 | CG  | LEU | 713 | 41.524 | 13.012 | 22.889 | 1.00 | 44.05 |
| ATOM | 5574 | CD1 | LEU | 713 | 42.853 | 13.737 | 22.734 | 1.00 | 39.96 |
| ATOM | 5575 | CD2 | LEU | 713 | 41.758 | 11.571 | 23.328 | 1.00 | 41.78 |
| ATOM | 5576 | C   | LEU | 713 | 38.665 | 13.519 | 25.477 | 1.00 | 47.50 |
| ATOM | 5577 | O   | LEU | 713 | 38.630 | 12.789 | 26.472 | 1.00 | 48.26 |
| ATOM | 5578 | N   | LYS | 714 | 38.098 | 14.725 | 25.440 | 1.00 | 47.08 |
| ATOM | 5580 | CA  | LYS | 714 | 37.419 | 15.302 | 26.600 | 1.00 | 45.59 |
| ATOM | 5581 | CB  | LYS | 714 | 36.974 | 16.727 | 26.293 | 1.00 | 47.53 |
| ATOM | 5582 | CG  | LYS | 714 | 38.126 | 17.661 | 26.064 | 1.00 | 51.33 |
| ATOM | 5583 | CD  | LYS | 714 | 37.647 | 19.044 | 25.689 | 1.00 | 59.12 |
| ATOM | 5584 | CE  | LYS | 714 | 38.836 | 19.917 | 25.273 | 1.00 | 64.39 |
| ATOM | 5585 | NZ  | LYS | 714 | 39.843 | 20.072 | 26.370 | 1.00 | 66.31 |
| ATOM | 5589 | C   | LYS | 714 | 36.217 | 14.476 | 27.056 | 1.00 | 44.19 |
| ATOM | 5590 | O   | LYS | 714 | 35.895 | 14.447 | 28.244 | 1.00 | 43.04 |
| ATOM | 5591 | N   | GLU | 715 | 35.565 | 13.805 | 26.112 | 1.00 | 43.89 |
| ATOM | 5593 | CA  | GLU | 715 | 34.401 | 12.976 | 26.424 | 1.00 | 44.12 |
| ATOM | 5594 | CB  | GLU | 715 | 33.512 | 12.785 | 25.190 | 1.00 | 47.40 |
| ATOM | 5595 | CG  | GLU | 715 | 32.860 | 14.053 | 24.623 | 1.00 | 52.31 |
| ATOM | 5596 | CD  | GLU | 715 | 31.953 | 13.763 | 23.427 | 1.00 | 56.22 |
| ATOM | 5597 | OE1 | GLU | 715 | 32.121 | 12.699 | 22.784 | 1.00 | 57.16 |
| ATOM | 5598 | OE2 | GLU | 715 | 31.059 | 14.588 | 23.138 | 1.00 | 57.32 |
| ATOM | 5599 | C   | GLU | 715 | 34.809 | 11.605 | 26.956 | 1.00 | 42.47 |
| ATOM | 5600 | O   | GLU | 715 | 33.964 | 10.718 | 27.094 | 1.00 | 41.03 |
| ATOM | 5601 | N   | GLY | 716 | 36.101 | 11.419 | 27.201 | 1.00 | 41.06 |
| ATOM | 5603 | CA  | GLY | 716 | 36.593 | 10.150 | 27.718 | 1.00 | 41.58 |
| ATOM | 5604 | C   | GLY | 716 | 36.548 | 8.985  | 26.739 | 1.00 | 41.60 |
| ATOM | 5605 | O   | GLY | 716 | 36.640 | 7.816  | 27.141 | 1.00 | 38.34 |
| ATOM | 5606 | N   | HIS | 717 | 36.469 | 9.303  | 25.450 | 1.00 | 42.80 |
| ATOM | 5608 | CA  | HIS | 717 | 36.398 | 8.278  | 24.420 | 1.00 | 45.03 |
| ATOM | 5609 | CB  | HIS | 717 | 36.082 | 8.894  | 23.052 | 1.00 | 46.28 |
| ATOM | 5610 | CG  | HIS | 717 | 35.987 | 7.887  | 21.940 | 1.00 | 48.73 |
| ATOM | 5611 | CD2 | HIS | 717 | 34.941 | 7.157  | 21.483 | 1.00 | 48.67 |
| ATOM | 5612 | ND1 | HIS | 717 | 37.071 | 7.521  | 21.169 | 1.00 | 49.33 |
| ATOM | 5614 | CE1 | HIS | 717 | 36.701 | 6.607  | 20.290 | 1.00 | 45.65 |
| ATOM | 5615 | NE2 | HIS | 717 | 35.410 | 6.370  | 20.460 | 1.00 | 45.87 |
| ATOM | 5617 | C   | HIS | 717 | 37.662 | 7.448  | 24.324 | 1.00 | 46.84 |
| ATOM | 5618 | O   | HIS | 717 | 38.767 | 7.980  | 24.319 | 1.00 | 48.06 |
| ATOM | 5619 | N   | ARG | 718 | 37.478 | 6.138  | 24.217 | 1.00 | 48.75 |
| ATOM | 5621 | CA  | ARG | 718 | 38.573 | 5.181  | 24.091 | 1.00 | 49.16 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 5622 | CB  | ARG | 718 | 38.694 | 4.345   | 25.370 | 1.00 | 46.96 |
| ATOM | 5623 | CG  | ARG | 718 | 39.005 | 5.164   | 26.617 | 1.00 | 49.78 |
| ATOM | 5624 | CD  | ARG | 718 | 40.344 | 5.891   | 26.474 | 1.00 | 52.81 |
| ATOM | 5625 | NE  | ARG | 718 | 40.724 | 6.639   | 27.672 | 1.00 | 52.99 |
| ATOM | 5627 | CZ  | ARG | 718 | 40.598 | 7.961   | 27.817 | 1.00 | 53.38 |
| ATOM | 5628 | NH1 | ARG | 718 | 40.094 | 8.705   | 26.836 | 1.00 | 52.33 |
| ATOM | 5631 | NH2 | ARG | 718 | 41.025 | 8.553   | 28.928 | 1.00 | 49.30 |
| ATOM | 5634 | C   | ARG | 718 | 38.257 | 4.293   | 22.878 | 1.00 | 50.73 |
| ATOM | 5635 | O   | ARG | 718 | 37.086 | 4.003   | 22.601 | 1.00 | 51.78 |
| ATOM | 5636 | N   | MET | 719 | 39.286 | 3.899   | 22.136 | 1.00 | 50.83 |
| ATOM | 5638 | CA  | MET | 719 | 39.086 | 3.072   | 20.948 | 1.00 | 50.56 |
| ATOM | 5639 | CB  | MET | 719 | 40.355 | 3.013   | 20.094 | 1.00 | 48.85 |
| ATOM | 5640 | CG  | MET | 719 | 40.748 | 4.325   | 19.438 | 1.00 | 45.25 |
| ATOM | 5641 | SD  | MET | 719 | 42.152 | 4.119   | 18.335 | 1.00 | 43.24 |
| ATOM | 5642 | CE  | MET | 719 | 43.471 | 4.066   | 19.465 | 1.00 | 36.42 |
| ATOM | 5643 | C   | MET | 719 | 38.649 | 1.671   | 21.312 | 1.00 | 51.07 |
| ATOM | 5644 | O   | MET | 719 | 39.087 | 1.132   | 22.325 | 1.00 | 48.42 |
| ATOM | 5645 | N   | ASP | 720 | 37.797 | 1.096   | 20.462 | 1.00 | 53.92 |
| ATOM | 5647 | CA  | ASP | 720 | 37.254 | -0.253  | 20.648 | 1.00 | 55.90 |
| ATOM | 5648 | CB  | ASP | 720 | 36.221 | -0.597  | 19.553 | 1.00 | 57.16 |
| ATOM | 5649 | CG  | ASP | 720 | 34.998 | 0.320   | 19.552 | 1.00 | 59.05 |
| ATOM | 5650 | OD1 | ASP | 720 | 34.951 | 1.316   | 20.312 | 1.00 | 63.29 |
| ATOM | 5651 | OD2 | ASP | 720 | 34.074 | 0.042   | 18.758 | 1.00 | 54.85 |
| ATOM | 5652 | C   | ASP | 720 | 38.326 | -1.343  | 20.638 | 1.00 | 55.89 |
| ATOM | 5653 | O   | ASP | 720 | 39.397 | -1.190  | 20.027 | 1.00 | 55.28 |
| ATOM | 5654 | N   | LYS | 721 | 38.008 | -2.450  | 21.304 | 1.00 | 56.09 |
| ATOM | 5656 | CA  | LYS | 721 | 38.892 | -3.605  | 21.370 | 1.00 | 56.46 |
| ATOM | 5657 | CB  | LYS | 721 | 38.344 | -4.606  | 22.378 | 1.00 | 58.16 |
| ATOM | 5658 | CG  | LYS | 721 | 39.005 | -5.977  | 22.316 | 1.00 | 62.49 |
| ATOM | 5659 | CD  | LYS | 721 | 38.449 | -6.873  | 23.401 | 1.00 | 66.40 |
| ATOM | 5660 | CE  | LYS | 721 | 38.474 | -8.329  | 22.995 | 1.00 | 68.27 |
| ATOM | 5661 | NZ  | LYS | 721 | 38.107 | -9.194  | 24.156 | 1.00 | 75.61 |
| ATOM | 5665 | C   | LYS | 721 | 38.930 | -4.241  | 19.985 | 1.00 | 56.00 |
| ATOM | 5666 | O   | LYS | 721 | 37.884 | -4.532  | 19.403 | 1.00 | 59.26 |
| ATOM | 5667 | N   | PRO | 722 | 40.133 | -4.439  | 19.423 | 1.00 | 54.10 |
| ATOM | 5668 | CD  | PRO | 722 | 41.461 | -3.968  | 19.836 | 1.00 | 53.72 |
| ATOM | 5669 | CA  | PRO | 722 | 40.208 | -5.046  | 18.094 | 1.00 | 51.82 |
| ATOM | 5670 | CB  | PRO | 722 | 41.702 | -4.953  | 17.759 | 1.00 | 49.09 |
| ATOM | 5671 | CG  | PRO | 722 | 42.143 | -3.768  | 18.501 | 1.00 | 49.06 |
| ATOM | 5672 | C   | PRO | 722 | 39.765 | -6.498  | 18.123 | 1.00 | 50.10 |
| ATOM | 5673 | O   | PRO | 722 | 39.678 | -7.120  | 19.188 | 1.00 | 48.82 |
| ATOM | 5674 | N   | SER | 723 | 39.453 | -7.020  | 16.945 | 1.00 | 49.87 |
| ATOM | 5676 | CA  | SER | 723 | 39.079 | -8.410  | 16.814 | 1.00 | 50.27 |
| ATOM | 5677 | CB  | SER | 723 | 38.396 | -8.643  | 15.473 | 1.00 | 48.56 |
| ATOM | 5678 | OG  | SER | 723 | 39.273 | -8.323  | 14.404 | 1.00 | 48.93 |
| ATOM | 5680 | C   | SER | 723 | 40.414 | -9.144  | 16.872 | 1.00 | 51.33 |
| ATOM | 5681 | O   | SER | 723 | 41.400 | -8.679  | 16.311 | 1.00 | 51.18 |
| ATOM | 5682 | N   | ASN | 724 | 40.445 | -10.284 | 17.551 | 1.00 | 54.65 |
| ATOM | 5684 | CA  | ASN | 724 | 41.673 | -11.062 | 17.706 | 1.00 | 56.76 |
| ATOM | 5685 | CB  | ASN | 724 | 42.370 | -11.286 | 16.359 | 1.00 | 58.96 |
| ATOM | 5686 | CG  | ASN | 724 | 41.698 | -12.345 | 15.543 | 1.00 | 62.08 |
| ATOM | 5687 | OD1 | ASN | 724 | 41.645 | -13.508 | 15.948 | 1.00 | 67.56 |

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|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 5688 | ND2 | ASN | 724 | 41.154 | -11.960 | 14.403 | 1.00 | 60.12 |
| ATOM | 5691 | C   | ASN | 724 | 42.622 | -10.381 | 18.683 | 1.00 | 57.26 |
| ATOM | 5692 | O   | ASN | 724 | 43.786 | -10.131 | 18.383 | 1.00 | 58.40 |
| ATOM | 5693 | N   | CYS | 725 | 42.089 | -10.045 | 19.845 | 1.00 | 57.58 |
| ATOM | 5695 | CA  | CYS | 725 | 42.852 | -9.418  | 20.908 | 1.00 | 57.02 |
| ATOM | 5696 | CB  | CYS | 725 | 42.835 | -7.885  | 20.803 | 1.00 | 55.65 |
| ATOM | 5697 | SG  | CYS | 725 | 43.782 | -7.034  | 22.119 | 1.00 | 52.17 |
| ATOM | 5698 | C   | CYS | 725 | 42.158 | -9.884  | 22.177 | 1.00 | 56.53 |
| ATOM | 5699 | O   | CYS | 725 | 40.927 | -9.954  | 22.240 | 1.00 | 55.99 |
| ATOM | 5700 | N   | THR | 726 | 42.957 | -10.279 | 23.155 | 1.00 | 56.09 |
| ATOM | 5702 | CA  | THR | 726 | 42.453 | -10.773 | 24.423 | 1.00 | 57.09 |
| ATOM | 5703 | CB  | THR | 726 | 43.551 | -11.579 | 25.129 | 1.00 | 57.12 |
| ATOM | 5704 | OG1 | THR | 726 | 44.588 | -10.696 | 25.562 | 1.00 | 59.14 |
| ATOM | 5706 | OG2 | THR | 726 | 44.152 | -12.587 | 24.154 | 1.00 | 55.09 |
| ATOM | 5707 | C   | THR | 726 | 41.994 | -9.608  | 25.288 | 1.00 | 57.58 |
| ATOM | 5708 | O   | THR | 726 | 42.555 | -8.518  | 25.195 | 1.00 | 58.49 |
| ATOM | 5709 | N   | ASN | 727 | 40.979 | -9.832  | 26.120 | 1.00 | 58.48 |
| ATOM | 5711 | CA  | ASN | 727 | 40.482 | -8.774  | 26.986 | 1.00 | 58.74 |
| ATOM | 5712 | CB  | ASN | 727 | 39.331 | -9.267  | 27.864 | 1.00 | 66.81 |
| ATOM | 5713 | CG  | ASN | 727 | 39.674 | -10.534 | 28.631 | 1.00 | 76.72 |
| ATOM | 5714 | OD1 | ASN | 727 | 40.778 | -10.689 | 29.161 | 1.00 | 80.48 |
| ATOM | 5715 | ND2 | ASN | 727 | 38.716 | -11.458 | 28.689 | 1.00 | 82.39 |
| ATOM | 5718 | C   | ASN | 727 | 41.606 | -8.238  | 27.852 | 1.00 | 55.48 |
| ATOM | 5719 | O   | ASN | 727 | 41.589 | -7.080  | 28.255 | 1.00 | 51.24 |
| ATOM | 5720 | N   | GLU | 728 | 42.589 | -9.099  | 28.114 | 1.00 | 55.37 |
| ATOM | 5722 | CA  | GLU | 728 | 43.757 | -8.739  | 28.913 | 1.00 | 55.53 |
| ATOM | 5723 | CB  | GLU | 728 | 44.611 | -9.983  | 29.198 | 1.00 | 55.75 |
| ATOM | 5724 | CG  | GLU | 728 | 45.881 | -9.699  | 30.006 | 1.00 | 58.24 |
| ATOM | 5725 | CD  | GLU | 728 | 46.606 | -10.958 | 30.463 | 1.00 | 58.16 |
| ATOM | 5726 | OE1 | GLU | 728 | 46.977 | -11.796 | 29.611 | 1.00 | 56.39 |
| ATOM | 5727 | OE2 | GLU | 728 | 46.816 | -11.102 | 31.686 | 1.00 | 58.35 |
| ATOM | 5728 | C   | GLU | 728 | 44.564 | -7.685  | 28.153 | 1.00 | 54.11 |
| ATOM | 5729 | O   | GLU | 728 | 44.790 | -6.575  | 28.654 | 1.00 | 55.67 |
| ATOM | 5730 | N   | LEU | 729 | 44.954 | -8.020  | 26.926 | 1.00 | 49.65 |
| ATOM | 5732 | CA  | LEU | 729 | 45.715 | -7.106  | 26.086 | 1.00 | 46.10 |
| ATOM | 5733 | CB  | LEU | 729 | 46.038 | -7.766  | 24.742 | 1.00 | 39.77 |
| ATOM | 5734 | CG  | LEU | 729 | 47.136 | -8.836  | 24.848 | 1.00 | 36.12 |
| ATOM | 5735 | CD1 | LEU | 729 | 47.118 | -9.757  | 23.673 | 1.00 | 34.89 |
| ATOM | 5736 | CD2 | LEU | 729 | 48.498 | -8.193  | 24.987 | 1.00 | 33.47 |
| ATOM | 5737 | C   | LEU | 729 | 44.950 | -5.794  | 25.908 | 1.00 | 45.05 |
| ATOM | 5738 | O   | LEU | 729 | 45.522 | -4.713  | 26.019 | 1.00 | 45.58 |
| ATOM | 5739 | N   | TYR | 730 | 43.640 | -5.884  | 25.722 | 1.00 | 43.53 |
| ATOM | 5741 | CA  | TYR | 730 | 42.831 | -4.692  | 25.557 | 1.00 | 43.57 |
| ATOM | 5742 | CB  | TYR | 730 | 41.414 | -5.064  | 25.097 | 1.00 | 41.49 |
| ATOM | 5743 | CG  | TYR | 730 | 40.492 | -3.870  | 24.951 | 1.00 | 40.28 |
| ATOM | 5744 | CD1 | TYR | 730 | 40.763 | -2.865  | 24.013 | 1.00 | 36.86 |
| ATOM | 5745 | CE1 | TYR | 730 | 39.937 | -1.752  | 23.891 | 1.00 | 36.21 |
| ATOM | 5746 | CD2 | TYR | 730 | 39.361 | -3.730  | 25.768 | 1.00 | 39.44 |
| ATOM | 5747 | CE2 | TYR | 730 | 38.522 | -2.616  | 25.654 | 1.00 | 38.13 |
| ATOM | 5748 | CZ  | TYR | 730 | 38.817 | -1.632  | 24.712 | 1.00 | 38.79 |
| ATOM | 5749 | OH  | TYR | 730 | 37.974 | -0.542  | 24.575 | 1.00 | 40.32 |
| ATOM | 5751 | C   | TYR | 730 | 42.806 | -3.866  | 26.856 | 1.00 | 44.45 |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5752 | O   | TYR | 730 | 42.786 | -2.632 | 26.818 | 1.00 | 43.45 |
| ATOM | 5753 | N   | MET | 731 | 42.798 | -4.534 | 28.006 | 1.00 | 46.44 |
| ATOM | 5755 | CA  | MET | 731 | 42.805 | -3.812 | 29.279 | 1.00 | 48.59 |
| ATOM | 5756 | CB  | MET | 731 | 42.516 | -4.748 | 30.447 | 1.00 | 54.69 |
| ATOM | 5757 | CG  | MET | 731 | 41.132 | -5.387 | 30.398 | 1.00 | 62.68 |
| ATOM | 5758 | SD  | MET | 731 | 39.781 | -4.189 | 30.392 | 1.00 | 70.49 |
| ATOM | 5759 | CE  | MET | 731 | 39.492 | -4.012 | 32.209 | 1.00 | 72.27 |
| ATOM | 5760 | C   | MET | 731 | 44.167 | -3.139 | 29.450 | 1.00 | 46.48 |
| ATOM | 5761 | O   | MET | 731 | 44.280 | -2.085 | 30.086 | 1.00 | 44.91 |
| ATOM | 5762 | N   | MET | 732 | 45.202 | -3.751 | 28.881 | 1.00 | 43.80 |
| ATOM | 5764 | CA  | MET | 732 | 46.538 | -3.167 | 28.939 | 1.00 | 43.03 |
| ATOM | 5765 | CB  | MET | 732 | 47.593 | -4.104 | 28.322 | 1.00 | 39.44 |
| ATOM | 5766 | CG  | MET | 732 | 49.028 | -3.578 | 28.427 | 1.00 | 36.02 |
| ATOM | 5767 | SD  | MET | 732 | 50.312 | -4.775 | 27.979 | 1.00 | 36.47 |
| ATOM | 5768 | CE  | MET | 732 | 50.547 | -5.573 | 29.530 | 1.00 | 41.29 |
| ATOM | 5769 | C   | MET | 732 | 46.474 | -1.833 | 28.188 | 1.00 | 42.08 |
| ATOM | 5770 | O   | MET | 732 | 46.995 | -0.827 | 28.659 | 1.00 | 42.14 |
| ATOM | 5771 | N   | MET | 733 | 45.775 | -1.822 | 27.054 | 1.00 | 43.14 |
| ATOM | 5773 | CA  | MET | 733 | 45.608 | -0.609 | 26.257 | 1.00 | 42.24 |
| ATOM | 5774 | CB  | MET | 733 | 44.852 | -0.877 | 24.947 | 1.00 | 41.41 |
| ATOM | 5775 | CG  | MET | 733 | 45.607 | -1.730 | 23.938 | 1.00 | 40.23 |
| ATOM | 5776 | SD  | MET | 733 | 44.669 | -2.025 | 22.419 | 1.00 | 38.02 |
| ATOM | 5777 | CE  | MET | 733 | 45.183 | -3.724 | 21.982 | 1.00 | 28.12 |
| ATOM | 5778 | C   | MET | 733 | 44.820 | 0.392  | 27.074 | 1.00 | 41.68 |
| ATOM | 5779 | O   | MET | 733 | 45.215 | 1.550  | 27.196 | 1.00 | 43.78 |
| ATOM | 5780 | N   | ARG | 734 | 43.713 | -0.053 | 27.655 | 1.00 | 42.59 |
| ATOM | 5782 | CA  | ARG | 734 | 42.893 | 0.839  | 28.467 | 1.00 | 42.92 |
| ATOM | 5783 | CB  | ARG | 734 | 41.642 | 0.119  | 28.966 | 1.00 | 42.35 |
| ATOM | 5784 | CG  | ARG | 734 | 40.753 | -0.374 | 27.852 | 1.00 | 39.76 |
| ATOM | 5785 | CD  | ARG | 734 | 40.360 | 0.763  | 26.959 | 1.00 | 41.83 |
| ATOM | 5786 | NE  | ARG | 734 | 39.535 | 1.745  | 27.653 | 1.00 | 45.36 |
| ATOM | 5788 | CZ  | ARG | 734 | 38.207 | 1.693  | 27.708 | 1.00 | 50.22 |
| ATOM | 5789 | NH1 | ARG | 734 | 37.542 | 0.708  | 27.117 | 1.00 | 51.18 |
| ATOM | 5792 | NH2 | ARG | 734 | 37.534 | 2.642  | 28.346 | 1.00 | 53.24 |
| ATOM | 5795 | C   | ARG | 734 | 43.719 | 1.385  | 29.630 | 1.00 | 42.42 |
| ATOM | 5796 | O   | ARG | 734 | 43.610 | 2.571  | 29.969 | 1.00 | 42.59 |
| ATOM | 5797 | N   | ASP | 735 | 44.591 | 0.544  | 30.187 | 1.00 | 41.40 |
| ATOM | 5799 | CA  | ASP | 735 | 45.464 | 0.959  | 31.286 | 1.00 | 43.33 |
| ATOM | 5800 | CB  | ASP | 735 | 46.337 | -0.194 | 31.755 | 1.00 | 48.28 |
| ATOM | 5801 | CG  | ASP | 735 | 45.556 | -1.256 | 32.496 | 1.00 | 54.86 |
| ATOM | 5802 | OD1 | ASP | 735 | 45.903 | -2.451 | 32.322 | 1.00 | 53.49 |
| ATOM | 5803 | OD2 | ASP | 735 | 44.612 | -0.900 | 33.245 | 1.00 | 55.59 |
| ATOM | 5804 | C   | ASP | 735 | 46.365 | 2.107  | 30.840 | 1.00 | 42.65 |
| ATOM | 5805 | O   | ASP | 735 | 46.484 | 3.124  | 31.543 | 1.00 | 44.03 |
| ATOM | 5806 | N   | CYS | 736 | 47.021 | 1.926  | 29.693 | 1.00 | 38.83 |
| ATOM | 5808 | CA  | CYS | 736 | 47.896 | 2.952  | 29.140 | 1.00 | 35.90 |
| ATOM | 5809 | CB  | CYS | 736 | 48.545 | 2.468  | 27.858 | 1.00 | 33.62 |
| ATOM | 5810 | SG  | CYS | 736 | 49.634 | 1.087  | 28.104 | 1.00 | 33.92 |
| ATOM | 5811 | C   | CYS | 736 | 47.100 | 4.208  | 28.855 | 1.00 | 35.96 |
| ATOM | 5812 | O   | CYS | 736 | 47.651 | 5.309  | 28.830 | 1.00 | 35.59 |
| ATOM | 5813 | N   | TRP | 737 | 45.793 | 4.039  | 28.668 | 1.00 | 38.02 |
| ATOM | 5815 | CA  | TRP | 737 | 44.906 | 5.156  | 28.372 | 1.00 | 40.14 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5816 | CB  | TRP | 737 | 43.910 | 4.766  | 27.274 | 1.00 | 40.93 |
| ATOM | 5817 | CG  | TRP | 737 | 44.563 | 4.379  | 25.977 | 1.00 | 42.36 |
| ATOM | 5818 | CD2 | TRP | 737 | 44.018 | 3.518  | 24.969 | 1.00 | 43.84 |
| ATOM | 5819 | CE2 | TRP | 737 | 44.972 | 3.437  | 23.929 | 1.00 | 46.42 |
| ATOM | 5820 | CE3 | TRP | 737 | 42.817 | 2.806  | 24.845 | 1.00 | 42.43 |
| ATOM | 5821 | CD1 | TRP | 737 | 45.793 | 4.775  | 25.519 | 1.00 | 42.57 |
| ATOM | 5822 | NE1 | TRP | 737 | 46.043 | 4.214  | 24.292 | 1.00 | 44.22 |
| ATOM | 5824 | CZ2 | TRP | 737 | 44.756 | 2.666  | 22.773 | 1.00 | 44.97 |
| ATOM | 5825 | CZ3 | TRP | 737 | 42.606 | 2.042  | 23.699 | 1.00 | 40.74 |
| ATOM | 5826 | CH2 | TRP | 737 | 43.571 | 1.978  | 22.682 | 1.00 | 40.75 |
| ATOM | 5827 | C   | TRP | 737 | 44.157 | 5.706  | 29.584 | 1.00 | 40.62 |
| ATOM | 5828 | O   | TRP | 737 | 43.085 | 6.285  | 29.437 | 1.00 | 41.37 |
| ATOM | 5829 | N   | HIS | 738 | 44.706 | 5.533  | 30.763 | 1.00 | 42.09 |
| ATOM | 5831 | CA  | HIS | 738 | 44.044 | 6.059  | 31.966 | 1.00 | 43.78 |
| ATOM | 5832 | CB  | HIS | 738 | 44.635 | 5.463  | 33.248 | 1.00 | 46.52 |
| ATOM | 5833 | CG  | HIS | 738 | 43.878 | 5.844  | 34.486 | 1.00 | 52.24 |
| ATOM | 5834 | CD2 | HIS | 738 | 43.599 | 7.053  | 35.025 | 1.00 | 50.95 |
| ATOM | 5835 | ND1 | HIS | 738 | 43.271 | 4.914  | 35.299 | 1.00 | 56.16 |
| ATOM | 5837 | CE1 | HIS | 738 | 42.643 | 5.536  | 36.285 | 1.00 | 57.23 |
| ATOM | 5838 | NE2 | HIS | 738 | 42.827 | 6.835  | 36.141 | 1.00 | 53.22 |
| ATOM | 5840 | C   | HIS | 738 | 44.183 | 7.577  | 31.964 | 1.00 | 42.81 |
| ATOM | 5841 | O   | HIS | 738 | 45.235 | 8.093  | 31.654 | 1.00 | 42.12 |
| ATOM | 5842 | N   | ALA | 739 | 43.121 | 8.285  | 32.324 | 1.00 | 45.66 |
| ATOM | 5844 | CA  | ALA | 739 | 43.130 | 9.750  | 32.350 | 1.00 | 49.42 |
| ATOM | 5845 | CB  | ALA | 739 | 41.739 | 10.262 | 32.681 | 1.00 | 53.04 |
| ATOM | 5846 | C   | ALA | 739 | 44.167 | 10.380 | 33.291 | 1.00 | 50.18 |
| ATOM | 5847 | O   | ALA | 739 | 44.710 | 11.450 | 33.006 | 1.00 | 51.86 |
| ATOM | 5848 | N   | VAL | 740 | 44.322 | 9.780  | 34.466 | 1.00 | 49.96 |
| ATOM | 5850 | CA  | VAL | 740 | 45.299 | 10.219 | 35.467 | 1.00 | 50.17 |
| ATOM | 5851 | CB  | VAL | 740 | 44.828 | 9.849  | 36.881 | 1.00 | 50.33 |
| ATOM | 5852 | CG1 | VAL | 740 | 45.880 | 10.209 | 37.896 | 1.00 | 51.40 |
| ATOM | 5853 | CG2 | VAL | 740 | 43.534 | 10.559 | 37.193 | 1.00 | 50.86 |
| ATOM | 5854 | C   | VAL | 740 | 46.626 | 9.497  | 35.196 | 1.00 | 49.81 |
| ATOM | 5855 | O   | VAL | 740 | 46.749 | 8.295  | 35.472 | 1.00 | 49.85 |
| ATOM | 5856 | N   | PRO | 741 | 47.646 | 10.230 | 34.713 | 1.00 | 47.92 |
| ATOM | 5857 | CD  | PRO | 741 | 47.618 | 11.683 | 34.476 | 1.00 | 46.97 |
| ATOM | 5858 | CA  | PRO | 741 | 48.968 | 9.686  | 34.393 | 1.00 | 46.47 |
| ATOM | 5859 | CB  | PRO | 741 | 49.796 | 10.941 | 34.134 | 1.00 | 44.38 |
| ATOM | 5860 | CG  | PRO | 741 | 48.800 | 11.877 | 33.561 | 1.00 | 44.86 |
| ATOM | 5861 | C   | PRO | 741 | 49.593 | 8.815  | 35.480 | 1.00 | 47.21 |
| ATOM | 5862 | O   | PRO | 741 | 50.243 | 7.816  | 35.176 | 1.00 | 46.77 |
| ATOM | 5863 | N   | SER | 742 | 49.380 | 9.181  | 36.741 | 1.00 | 48.87 |
| ATOM | 5865 | CA  | SER | 742 | 49.939 | 8.430  | 37.860 | 1.00 | 50.19 |
| ATOM | 5866 | CB  | SER | 742 | 49.753 | 9.203  | 39.166 | 1.00 | 51.87 |
| ATOM | 5867 | OG  | SER | 742 | 48.389 | 9.514  | 39.391 | 1.00 | 54.19 |
| ATOM | 5869 | C   | SER | 742 | 49.331 | 7.040  | 38.010 | 1.00 | 51.30 |
| ATOM | 5870 | O   | SER | 742 | 49.863 | 6.192  | 38.723 | 1.00 | 51.14 |
| ATOM | 5871 | N   | GLN | 743 | 48.207 | 6.814  | 37.343 | 1.00 | 53.07 |
| ATOM | 5873 | CA  | GLN | 743 | 47.531 | 5.531  | 37.414 | 1.00 | 53.50 |
| ATOM | 5874 | CB  | GLN | 743 | 46.015 | 5.745  | 37.548 | 1.00 | 59.34 |
| ATOM | 5875 | CG  | GLN | 743 | 45.412 | 5.307  | 38.898 | 1.00 | 66.19 |
| ATOM | 5876 | CD  | GLN | 743 | 46.133 | 5.896  | 40.106 | 1.00 | 70.07 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 5877 | OE1 | GLN | 743 | 46.750 | 5.170  | 40.885 | 1.00 | 73.86 |
| ATOM | 5878 | NE2 | GLN | 743 | 46.047 | 7.209  | 40.273 | 1.00 | 72.01 |
| ATOM | 5881 | C   | GLN | 743 | 47.850 | 4.613  | 36.236 | 1.00 | 51.14 |
| ATOM | 5882 | O   | GLN | 743 | 47.504 | 3.425  | 36.266 | 1.00 | 51.79 |
| ATOM | 5883 | N   | ARG | 744 | 48.484 | 5.153  | 35.196 | 1.00 | 48.31 |
| ATOM | 5885 | CA  | ARG | 744 | 48.849 | 4.343  | 34.027 | 1.00 | 45.49 |
| ATOM | 5886 | CB  | ARG | 744 | 49.326 | 5.224  | 32.869 | 1.00 | 40.33 |
| ATOM | 5887 | CG  | ARG | 744 | 48.322 | 6.200  | 32.324 | 1.00 | 36.32 |
| ATOM | 5888 | CD  | ARG | 744 | 48.944 | 7.100  | 31.262 | 1.00 | 28.55 |
| ATOM | 5889 | NE  | ARG | 744 | 48.050 | 8.203  | 30.961 | 1.00 | 28.86 |
| ATOM | 5891 | CZ  | ARG | 744 | 48.429 | 9.409  | 30.547 | 1.00 | 30.58 |
| ATOM | 5892 | NH1 | ARG | 744 | 49.707 | 9.700  | 30.357 | 1.00 | 26.02 |
| ATOM | 5895 | NH2 | ARG | 744 | 47.516 | 10.354 | 30.386 | 1.00 | 30.62 |
| ATOM | 5898 | C   | ARG | 744 | 50.016 | 3.454  | 34.452 | 1.00 | 47.35 |
| ATOM | 5899 | O   | ARG | 744 | 50.794 | 3.824  | 35.334 | 1.00 | 52.01 |
| ATOM | 5900 | N   | PRO | 745 | 50.133 | 2.251  | 33.869 | 1.00 | 46.36 |
| ATOM | 5901 | CD  | PRO | 745 | 49.248 | 1.559  | 32.921 | 1.00 | 45.54 |
| ATOM | 5902 | CA  | PRO | 745 | 51.261 | 1.402  | 34.271 | 1.00 | 43.41 |
| ATOM | 5903 | CB  | PRO | 745 | 50.972 | 0.078  | 33.547 | 1.00 | 41.77 |
| ATOM | 5904 | CG  | PRO | 745 | 50.155 | 0.491  | 32.354 | 1.00 | 42.26 |
| ATOM | 5905 | C   | PRO | 745 | 52.590 | 2.007  | 33.822 | 1.00 | 40.30 |
| ATOM | 5906 | O   | PRO | 745 | 52.621 | 2.905  | 32.990 | 1.00 | 39.73 |
| ATOM | 5907 | N   | THR | 746 | 53.679 | 1.570  | 34.433 | 1.00 | 39.14 |
| ATOM | 5909 | CA  | THR | 746 | 54.997 | 2.056  | 34.039 | 1.00 | 38.35 |
| ATOM | 5910 | CB  | THR | 746 | 55.992 | 2.104  | 35.249 | 1.00 | 36.75 |
| ATOM | 5911 | OG1 | THR | 746 | 56.202 | 0.776  | 35.769 | 1.00 | 32.25 |
| ATOM | 5913 | CG2 | THR | 746 | 55.477 | 3.037  | 36.341 | 1.00 | 30.31 |
| ATOM | 5914 | C   | THR | 746 | 55.568 | 1.102  | 32.987 | 1.00 | 37.90 |
| ATOM | 5915 | O   | THR | 746 | 55.185 | -0.068 | 32.938 | 1.00 | 37.99 |
| ATOM | 5916 | N   | PHE | 747 | 56.490 | 1.584  | 32.157 | 1.00 | 35.94 |
| ATOM | 5918 | CA  | PHE | 747 | 57.106 | 0.716  | 31.161 | 1.00 | 35.00 |
| ATOM | 5919 | CB  | PHE | 747 | 58.124 | 1.469  | 30.309 | 1.00 | 30.45 |
| ATOM | 5920 | CG  | PHE | 747 | 57.512 | 2.174  | 29.142 | 1.00 | 27.61 |
| ATOM | 5921 | CD1 | PHE | 747 | 56.950 | 1.450  | 28.103 | 1.00 | 23.68 |
| ATOM | 5922 | CD2 | PHE | 747 | 57.468 | 3.556  | 29.094 | 1.00 | 27.97 |
| ATOM | 5923 | CE1 | PHE | 747 | 56.352 | 2.088  | 27.033 | 1.00 | 23.56 |
| ATOM | 5924 | CE2 | PHE | 747 | 56.869 | 4.209  | 28.027 | 1.00 | 26.92 |
| ATOM | 5925 | CZ  | PHE | 747 | 56.312 | 3.470  | 26.995 | 1.00 | 26.21 |
| ATOM | 5926 | C   | PHE | 747 | 57.766 | -0.477 | 31.826 | 1.00 | 36.37 |
| ATOM | 5927 | O   | PHE | 747 | 57.920 | -1.525 | 31.219 | 1.00 | 37.11 |
| ATOM | 5928 | N   | LYS | 748 | 58.177 | -0.312 | 33.075 | 1.00 | 39.68 |
| ATOM | 5930 | CA  | LYS | 748 | 58.797 | -1.411 | 33.807 | 1.00 | 42.20 |
| ATOM | 5931 | CB  | LYS | 748 | 59.433 | -0.895 | 35.095 | 1.00 | 46.17 |
| ATOM | 5932 | CG  | LYS | 748 | 59.978 | -1.991 | 35.984 | 1.00 | 54.78 |
| ATOM | 5933 | CD  | LYS | 748 | 60.794 | -1.428 | 37.135 | 1.00 | 58.53 |
| ATOM | 5934 | CE  | LYS | 748 | 61.239 | -2.537 | 38.075 | 1.00 | 59.33 |
| ATOM | 5935 | NZ  | LYS | 748 | 62.167 | -2.025 | 39.120 | 1.00 | 62.36 |
| ATOM | 5939 | C   | LYS | 748 | 57.723 | -2.463 | 34.111 | 1.00 | 42.78 |
| ATOM | 5940 | O   | LYS | 748 | 57.998 | -3.664 | 34.075 | 1.00 | 37.97 |
| ATOM | 5941 | N   | GLN | 749 | 56.503 | -1.992 | 34.392 | 1.00 | 43.27 |
| ATOM | 5943 | CA  | GLN | 749 | 55.365 | -2.866 | 34.671 | 1.00 | 43.39 |
| ATOM | 5944 | CB  | GLN | 749 | 54.146 | -2.056 | 35.146 | 1.00 | 47.37 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 5945 | CG  | GLN | 749 | 54.236 | -1.504  | 36.569 | 1.00 | 51.86 |
| ATOM | 5946 | CD  | GLN | 749 | 53.036 | -0.639  | 36.938 | 1.00 | 54.76 |
| ATOM | 5947 | OE1 | GLN | 749 | 53.181 | 0.504   | 37.350 | 1.00 | 58.36 |
| ATOM | 5948 | NE2 | GLN | 749 | 51.846 | -1.179  | 36.769 | 1.00 | 59.25 |
| ATOM | 5951 | C   | GLN | 749 | 55.006 | -3.607  | 33.389 | 1.00 | 41.66 |
| ATOM | 5952 | O   | GLN | 749 | 54.978 | -4.841  | 33.355 | 1.00 | 40.25 |
| ATOM | 5953 | N   | LEU | 750 | 54.759 | -2.843  | 32.327 | 1.00 | 41.47 |
| ATOM | 5955 | CA  | LEU | 750 | 54.398 | -3.387  | 31.018 | 1.00 | 40.00 |
| ATOM | 5956 | CB  | LEU | 750 | 54.366 | -2.279  | 29.966 | 1.00 | 40.55 |
| ATOM | 5957 | CG  | LEU | 750 | 53.316 | -1.174  | 30.112 | 1.00 | 39.94 |
| ATOM | 5958 | CD1 | LEU | 750 | 53.714 | 0.019   | 29.257 | 1.00 | 41.03 |
| ATOM | 5959 | CD2 | LEU | 750 | 51.952 | -1.696  | 29.722 | 1.00 | 37.80 |
| ATOM | 5960 | C   | LEU | 750 | 55.383 | -4.452  | 30.581 | 1.00 | 39.61 |
| ATOM | 5961 | O   | LEU | 750 | 54.990 | -5.470  | 30.027 | 1.00 | 42.08 |
| ATOM | 5962 | N   | VAL | 751 | 56.670 | -4.207  | 30.804 | 1.00 | 40.63 |
| ATOM | 5964 | CA  | VAL | 751 | 57.691 | -5.177  | 30.422 | 1.00 | 39.65 |
| ATOM | 5965 | CB  | VAL | 751 | 59.115 | -4.639  | 30.677 | 1.00 | 33.44 |
| ATOM | 5966 | CG1 | VAL | 751 | 60.142 | -5.694  | 30.351 | 1.00 | 31.57 |
| ATOM | 5967 | CG2 | VAL | 751 | 59.372 | -3.433  | 29.825 | 1.00 | 25.19 |
| ATOM | 5968 | C   | VAL | 751 | 57.458 | -6.468  | 31.204 | 1.00 | 43.58 |
| ATOM | 5969 | O   | VAL | 751 | 57.530 | -7.563  | 30.646 | 1.00 | 44.81 |
| ATOM | 5970 | N   | GLU | 752 | 57.116 | -6.339  | 32.481 | 1.00 | 46.24 |
| ATOM | 5972 | CA  | GLU | 752 | 56.869 | -7.518  | 33.301 | 1.00 | 50.55 |
| ATOM | 5973 | CB  | GLU | 752 | 56.781 | -7.137  | 34.783 | 1.00 | 53.70 |
| ATOM | 5974 | CG  | GLU | 752 | 58.090 | -6.541  | 35.310 | 1.00 | 56.60 |
| ATOM | 5975 | CD  | GLU | 752 | 58.079 | -6.243  | 36.792 | 1.00 | 56.20 |
| ATOM | 5976 | OE1 | GLU | 752 | 58.387 | -5.092  | 37.178 | 1.00 | 53.45 |
| ATOM | 5977 | OE2 | GLU | 752 | 57.789 | -7.170  | 37.573 | 1.00 | 60.28 |
| ATOM | 5978 | C   | GLU | 752 | 55.622 | -8.275  | 32.837 | 1.00 | 50.90 |
| ATOM | 5979 | O   | GLU | 752 | 55.689 | -9.474  | 32.555 | 1.00 | 51.03 |
| ATOM | 5980 | N   | ASP | 753 | 54.501 | -7.570  | 32.708 | 1.00 | 51.12 |
| ATOM | 5982 | CA  | ASP | 753 | 53.251 | -8.184  | 32.265 | 1.00 | 48.76 |
| ATOM | 5983 | CB  | ASP | 753 | 52.122 | -7.160  | 32.249 | 1.00 | 51.11 |
| ATOM | 5984 | CG  | ASP | 753 | 51.646 | -6.805  | 33.636 | 1.00 | 54.97 |
| ATOM | 5985 | OD1 | ASP | 753 | 51.592 | -7.715  | 34.495 | 1.00 | 58.37 |
| ATOM | 5986 | OD2 | ASP | 753 | 51.319 | -5.618  | 33.864 | 1.00 | 56.38 |
| ATOM | 5987 | C   | ASP | 753 | 53.381 | -8.790  | 30.881 | 1.00 | 48.02 |
| ATOM | 5988 | O   | ASP | 753 | 52.991 | -9.935  | 30.672 | 1.00 | 48.32 |
| ATOM | 5989 | N   | LEU | 754 | 53.925 | -8.020  | 29.940 | 1.00 | 45.16 |
| ATOM | 5991 | CA  | LEU | 754 | 54.111 | -8.490  | 28.571 | 1.00 | 44.82 |
| ATOM | 5992 | CB  | LEU | 754 | 54.696 | -7.387  | 27.691 | 1.00 | 42.70 |
| ATOM | 5993 | CG  | LEU | 754 | 53.736 | -6.263  | 27.298 | 1.00 | 42.92 |
| ATOM | 5994 | CD1 | LEU | 754 | 54.500 | -5.236  | 26.495 | 1.00 | 41.44 |
| ATOM | 5995 | CD2 | LEU | 754 | 52.537 | -6.822  | 26.502 | 1.00 | 42.86 |
| ATOM | 5996 | C   | LEU | 754 | 55.001 | -9.716  | 28.529 | 1.00 | 46.00 |
| ATOM | 5997 | O   | LEU | 754 | 54.815 | -10.606 | 27.708 | 1.00 | 45.88 |
| ATOM | 5998 | N   | ASP | 755 | 55.975 | -9.752  | 29.424 | 1.00 | 47.37 |
| ATOM | 6000 | CA  | ASP | 755 | 56.889 | -10.873 | 29.516 | 1.00 | 48.88 |
| ATOM | 6001 | CB  | ASP | 755 | 57.898 | -10.584 | 30.628 | 1.00 | 49.89 |
| ATOM | 6002 | CG  | ASP | 755 | 58.998 | -11.616 | 30.717 | 1.00 | 51.73 |
| ATOM | 6003 | OD1 | ASP | 755 | 59.640 | -11.680 | 31.785 | 1.00 | 55.47 |
| ATOM | 6004 | OD2 | ASP | 755 | 59.236 | -12.354 | 29.738 | 1.00 | 50.98 |

|      |      |     |     |      |        |         |        |      |            |
|------|------|-----|-----|------|--------|---------|--------|------|------------|
| ATOM | 6005 | C   | ASP | 755  | 56.024 | -12.093 | 29.864 | 1.00 | 51.26      |
| ATOM | 6006 | O   | ASP | 755  | 56.021 | -13.107 | 29.155 | 1.00 | 50.49      |
| ATOM | 6007 | N   | ARG | 756  | 55.227 | -11.940 | 30.917 | 1.00 | 52.15      |
| ATOM | 6009 | CA  | ARG | 756  | 54.332 | -12.989 | 31.385 | 1.00 | 53.30      |
| ATOM | 6010 | CB  | ARG | 756  | 53.556 | -12.501 | 32.611 | 1.00 | 54.54      |
| ATOM | 6011 | CG  | ARG | 756  | 52.389 | -13.380 | 33.029 | 1.00 | 54.26      |
| ATOM | 6012 | CD  | ARG | 756  | 51.672 | -12.772 | 34.215 | 1.00 | 56.76      |
| ATOM | 6013 | NE  | ARG | 756  | 51.293 | -11.382 | 33.969 | 1.00 | 61.39      |
| ATOM | 6015 | CZ  | ARG | 756  | 50.259 | -11.002 | 33.221 | 1.00 | 62.60      |
| ATOM | 6016 | NH1 | ARG | 756  | 49.487 | -11.909 | 32.642 | 1.00 | 61.18      |
| ATOM | 6019 | NH2 | ARG | 756  | 49.986 | -9.711  | 33.064 | 1.00 | 63.72      |
| ATOM | 6022 | C   | ARG | 756  | 53.357 | -13.420 | 30.297 | 1.00 | 53.03      |
| ATOM | 6023 | O   | ARG | 756  | 53.243 | -14.607 | 30.000 | 1.00 | 54.82      |
| ATOM | 6024 | N   | ILE | 757  | 52.687 | -12.452 | 29.680 | 1.00 | 51.18      |
| ATOM | 6026 | CA  | ILE | 757  | 51.709 | -12.732 | 28.630 | 1.00 | 48.68      |
| ATOM | 6027 | CB  | ILE | 757  | 51.025 | -11.435 | 28.120 | 1.00 | 47.88      |
| ATOM | 6028 | CG2 | ILE | 757  | 50.112 | -11.752 | 26.953 | 1.00 | 45.56      |
| ATOM | 6029 | CG1 | ILE | 757  | 50.247 | -10.763 | 29.258 | 1.00 | 47.77      |
| ATOM | 6030 | CD1 | ILE | 757  | 49.651 | -9.414  | 28.914 | 1.00 | 46.00      |
| ATOM | 6031 | C   | ILE | 757  | 52.314 | -13.482 | 27.449 | 1.00 | 48.30      |
| ATOM | 6032 | O   | ILE | 757  | 51.694 | -14.409 | 26.937 | 1.00 | 45.61      |
| ATOM | 6033 | N   | VAL | 758  | 53.523 | -13.094 | 27.038 | 1.00 | 48.88      |
| ATOM | 6035 | CA  | VAL | 758  | 54.202 | -13.734 | 25.912 | 1.00 | 49.96      |
| ATOM | 6036 | CB  | VAL | 758  | 55.602 | -13.101 | 25.615 | 1.00 | 47.80      |
| ATOM | 6037 | CG1 | VAL | 758  | 56.313 | -13.964 | 24.502 | 1.00 | 44.17      |
| ATOM | 6038 | CG2 | VAL | 758  | 55.461 | -11.660 | 25.188 | 1.00 | 46.65      |
| ATOM | 6039 | C   | VAL | 758  | 54.378 | -15.217 | 26.196 | 1.00 | 54.00      |
| ATOM | 6040 | O   | VAL | 758  | 54.218 | -16.050 | 25.306 | 1.00 | 53.52      |
| ATOM | 6041 | N   | ALA | 759  | 54.697 | -15.540 | 27.445 | 1.00 | 57.83      |
| ATOM | 6043 | CA  | ALA | 759  | 54.898 | -16.926 | 27.844 | 1.00 | 61.94      |
| ATOM | 6044 | CB  | ALA | 759  | 55.447 | -16.987 | 29.257 | 1.00 | 62.30      |
| ATOM | 6045 | C   | ALA | 759  | 53.592 | -17.702 | 27.761 | 1.00 | 65.09      |
| ATOM | 6046 | O   | ALA | 759  | 53.555 | -18.823 | 27.254 | 1.00 | 66.39      |
| ATOM | 6047 | N   | LEU | 760  | 52.519 | -17.090 | 28.248 | 1.00 | 66.99      |
| ATOM | 6049 | CA  | LEU | 760  | 51.209 | -17.720 | 28.246 | 1.00 | 68.78      |
| ATOM | 6050 | CB  | LEU | 760  | 50.314 | -17.090 | 29.320 | 1.00 | 68.07      |
| ATOM | 6051 | CG  | LEU | 760  | 50.729 | -17.330 | 30.777 | 1.00 | 67.01      |
| ATOM | 6052 | CD1 | LEU | 760  | 49.808 | -16.563 | 31.722 | 1.00 | 67.93      |
| ATOM | 6053 | CD2 | LEU | 760  | 50.701 | -18.819 | 31.083 | 1.00 | 65.17      |
| ATOM | 6054 | C   | LEU | 760  | 50.510 | -17.666 | 26.892 | 1.00 | 71.19      |
| ATOM | 6055 | O   | LEU | 760  | 49.342 | -18.039 | 26.787 | 1.00 | 73.15      |
| ATOM | 6056 | N   | THR | 761  | 51.210 | -17.201 | 25.860 | 1.00 | 73.38      |
| ATOM | 6058 | CA  | THR | 761  | 50.626 | -17.113 | 24.518 | 1.00 | 73.92      |
| ATOM | 6059 | CB  | THR | 761  | 50.963 | -15.760 | 23.829 | 1.00 | 72.65      |
| ATOM | 6060 | OG1 | THR | 761  | 50.353 | -14.690 | 24.555 | 1.00 | 74.44      |
| ATOM | 6062 | CG2 | THR | 761  | 50.435 | -15.731 | 22.420 | 1.00 | 70.32      |
| ATOM | 6063 | C   | THR | 761  | 51.080 | -18.276 | 23.636 | 1.00 | 74.66      |
| ATOM | 6064 | O   | THR | 761  | 52.276 | -18.520 | 23.463 | 1.00 | 75.08      |
| ATOM | 6065 | SG  | CYS | 1603 | 19.100 | -9.073  | 19.903 | 0.50 | 30.84 PRT2 |
| ATOM | 6066 | CG  | MET | 534  | 69.385 | 12.295  | 23.393 | 0.50 | 33.69 PRT2 |
| ATOM | 6067 | SD  | MET | 534  | 69.112 | 13.312  | 24.832 | 0.50 | 34.44 PRT2 |
| ATOM | 6068 | CE  | MET | 534  | 70.067 | 12.429  | 26.060 | 0.50 | 36.92 PRT2 |

|      |      |     |      |     |         |         |        |      |       |      |
|------|------|-----|------|-----|---------|---------|--------|------|-------|------|
| ATOM | 6069 | SG  | CYS  | 603 | 56.370  | -7.959  | 16.451 | 0.50 | 41.20 | PRT2 |
| ATOM | 2716 | OH2 | TIP3 | 1   | 71.864  | 25.128  | 2.721  | 1.00 | 26.20 |      |
| ATOM | 2719 | OH2 | TIP3 | 2   | 39.862  | 4.160   | 16.115 | 1.00 | 42.43 |      |
| ATOM | 2722 | OH2 | TIP3 | 3   | 83.875  | 19.969  | 10.572 | 1.00 | 23.41 |      |
| ATOM | 2725 | OH2 | TIP3 | 4   | 83.585  | 20.356  | 7.953  | 1.00 | 30.15 |      |
| ATOM | 2728 | OH2 | TIP3 | 5   | 75.100  | 16.407  | 6.948  | 1.00 | 46.78 |      |
| ATOM | 2731 | OH2 | TIP3 | 6   | 86.616  | 19.701  | 9.707  | 1.00 | 44.37 |      |
| ATOM | 2734 | OH2 | TIP3 | 7   | 52.270  | 10.726  | 24.472 | 1.00 | 40.13 |      |
| ATOM | 2737 | OH2 | TIP3 | 8   | 55.346  | 9.394   | 22.489 | 1.00 | 29.09 |      |
| ATOM | 2740 | OH2 | TIP3 | 9   | 56.794  | 4.380   | 32.527 | 1.00 | 28.02 |      |
| ATOM | 2743 | OH2 | TIP3 | 10  | 52.425  | 4.653   | 13.421 | 1.00 | 18.63 |      |
| ATOM | 2746 | OH2 | TIP3 | 11  | 41.527  | 5.347   | 22.682 | 1.00 | 32.60 |      |
| ATOM | 2749 | OH2 | TIP3 | 12  | 44.868  | 9.058   | 21.659 | 1.00 | 34.90 |      |
| ATOM | 2752 | OH2 | TIP3 | 13  | 64.548  | -2.881  | 29.048 | 1.00 | 32.56 |      |
| ATOM | 2755 | OH2 | TIP3 | 14  | 77.179  | 13.205  | 23.892 | 1.00 | 30.36 |      |
| ATOM | 2758 | OH2 | TIP3 | 15  | 79.309  | 16.826  | 18.132 | 1.00 | 55.69 |      |
| ATOM | 2761 | OH2 | TIP3 | 16  | 83.279  | 11.681  | 16.069 | 1.00 | 21.18 |      |
| ATOM | 2764 | OH2 | TIP3 | 17  | 13.978  | -9.614  | 0.374  | 1.00 | 23.81 |      |
| ATOM | 2767 | OH2 | TIP3 | 18  | 38.294  | 0.616   | 5.237  | 1.00 | 48.89 |      |
| ATOM | 2770 | OH2 | TIP3 | 19  | 27.114  | 6.248   | 5.051  | 1.00 | 19.82 |      |
| ATOM | 2773 | OH2 | TIP3 | 20  | 34.369  | -1.759  | 16.798 | 1.00 | 43.83 |      |
| ATOM | 2776 | OH2 | TIP3 | 21  | 20.500  | 2.296   | 28.237 | 1.00 | 53.46 |      |
| ATOM | 2779 | OH2 | TIP3 | 22  | 50.938  | -11.733 | 38.257 | 1.00 | 51.73 |      |
| ATOM | 2782 | OH2 | TIP3 | 23  | 17.066  | -5.917  | -2.027 | 1.00 | 29.88 |      |
| ATOM | 2785 | OH2 | TIP3 | 24  | 27.873  | 8.078   | 15.136 | 1.00 | 46.40 |      |
| ATOM | 2788 | OH2 | TIP3 | 25  | 31.459  | 0.037   | 6.873  | 1.00 | 33.38 |      |
| ATOM | 2791 | OH2 | TIP3 | 26  | 27.088  | -12.845 | 27.724 | 1.00 | 37.01 |      |
| ATOM | 2794 | OH2 | TIP3 | 27  | 28.577  | -17.329 | 12.884 | 1.00 | 37.31 |      |
| ATOM | 2797 | OH2 | TIP3 | 28  | 88.863  | 14.111  | 8.054  | 1.00 | 41.25 |      |
| ATOM | 2800 | OH2 | TIP3 | 29  | -2.311  | -3.712  | 11.485 | 1.00 | 30.72 |      |
| ATOM | 2803 | OH2 | TIP3 | 30  | 34.895  | -4.269  | 18.658 | 1.00 | 28.99 |      |
| ATOM | 2806 | OH2 | TIP3 | 31  | 80.531  | 18.007  | 9.739  | 1.00 | 23.83 |      |
| ATOM | 2809 | OH2 | TIP3 | 32  | 5.519   | 3.787   | 10.628 | 1.00 | 20.39 |      |
| ATOM | 2812 | OH2 | TIP3 | 33  | -10.523 | 5.304   | 11.469 | 1.00 | 20.31 |      |
| ATOM | 2815 | OH2 | TIP3 | 34  | 29.538  | -8.848  | 20.187 | 1.00 | 43.26 |      |
| ATOM | 2818 | OH2 | TIP3 | 35  | 5.866   | 3.469   | 13.367 | 1.00 | 21.16 |      |
| ATOM | 2821 | OH2 | TIP3 | 36  | 31.810  | 3.038   | 0.203  | 1.00 | 65.03 |      |
| ATOM | 2824 | OH2 | TIP3 | 37  | 19.879  | 2.087   | -3.828 | 1.00 | 34.62 |      |
| ATOM | 2827 | OH2 | TIP3 | 38  | 61.882  | 2.577   | 32.790 | 1.00 | 43.01 |      |
| ATOM | 2830 | OH2 | TIP3 | 39  | 21.062  | -6.897  | -4.255 | 1.00 | 26.18 |      |
| ATOM | 2833 | OH2 | TIP3 | 40  | -15.562 | 8.847   | 22.744 | 1.00 | 40.33 |      |
| ATOM | 2836 | OH2 | TIP3 | 41  | 40.043  | 2.380   | 8.610  | 1.00 | 65.14 |      |
| ATOM | 2839 | OH2 | TIP3 | 42  | 19.176  | 11.322  | 0.332  | 1.00 | 33.04 |      |
| ATOM | 2842 | OH2 | TIP3 | 43  | 67.221  | 8.965   | 17.535 | 1.00 | 14.78 |      |
| ATOM | 2845 | OH2 | TIP3 | 44  | 87.877  | 18.828  | 18.789 | 1.00 | 50.00 |      |
| ATOM | 2848 | OH2 | TIP3 | 45  | 74.676  | 17.083  | 4.253  | 1.00 | 43.45 |      |
| ATOM | 2851 | OH2 | TIP3 | 46  | 29.458  | 16.709  | 10.527 | 1.00 | 37.44 |      |
| ATOM | 2854 | OH2 | TIP3 | 47  | 66.590  | 7.242   | 15.359 | 1.00 | 27.63 |      |
| ATOM | 2857 | OH2 | TIP3 | 48  | 85.038  | 21.651  | 5.881  | 1.00 | 27.12 |      |
| ATOM | 2860 | OH2 | TIP3 | 49  | -4.762  | 3.091   | 3.313  | 1.00 | 13.83 |      |
| ATOM | 2863 | OH2 | TIP3 | 50  | 19.509  | 4.951   | 5.063  | 1.00 | 33.74 |      |
| ATOM | 2866 | OH2 | TIP3 | 51  | 34.833  | 5.465   | 24.635 | 1.00 | 32.77 |      |

|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 2869 | OH2 | TIP3 | 52  | 34.907  | -17.187 | 13.739 | 1.00 | 39.47 |
| ATOM | 2872 | OH2 | TIP3 | 53  | 60.000  | 7.568   | 27.982 | 1.00 | 31.38 |
| ATOM | 2875 | OH2 | TIP3 | 54  | -7.341  | -1.418  | 6.308  | 1.00 | 40.22 |
| ATOM | 2878 | OH2 | TIP3 | 55  | 55.218  | 12.161  | 25.430 | 1.00 | 40.99 |
| ATOM | 2881 | OH2 | TIP3 | 56  | 68.597  | 6.912   | 16.955 | 1.00 | 45.39 |
| ATOM | 2884 | OH2 | TIP3 | 57  | 73.486  | 20.957  | 19.260 | 1.00 | 49.23 |
| ATOM | 2887 | OH2 | TIP3 | 58  | 3.555   | -8.367  | -8.166 | 1.00 | 20.02 |
| ATOM | 2890 | OH2 | TIP3 | 59  | 38.079  | 10.933  | 5.669  | 1.00 | 27.07 |
| ATOM | 2893 | OH2 | TIP3 | 60  | 29.817  | -9.690  | -1.649 | 1.00 | 44.28 |
| ATOM | 2896 | OH2 | TIP3 | 61  | 49.332  | 1.501   | 12.262 | 1.00 | 42.78 |
| ATOM | 2899 | OH2 | TIP3 | 62  | 41.366  | 3.969   | 28.834 | 1.00 | 37.60 |
| ATOM | 2902 | OH2 | TIP3 | 63  | 10.523  | -13.468 | 0.864  | 1.00 | 45.18 |
| ATOM | 2905 | OH2 | TIP3 | 64  | -1.001  | -4.658  | 21.574 | 1.00 | 35.58 |
| ATOM | 2908 | OH2 | TIP3 | 65  | 30.278  | 16.435  | 13.217 | 1.00 | 48.75 |
| ATOM | 2911 | OH2 | TIP3 | 66  | 8.115   | 4.304   | 3.317  | 1.00 | 16.04 |
| ATOM | 2914 | OH2 | TIP3 | 67  | 73.460  | 18.707  | 22.744 | 1.00 | 34.79 |
| ATOM | 2917 | OH2 | TIP3 | 68  | -8.041  | -3.332  | 24.939 | 1.00 | 44.96 |
| ATOM | 2920 | OH2 | TIP3 | 69  | 66.672  | -4.643  | 28.739 | 1.00 | 62.39 |
| ATOM | 2923 | OH2 | TIP3 | 70  | 21.770  | -20.943 | 4.990  | 1.00 | 32.98 |
| ATOM | 2926 | OH2 | TIP3 | 71  | 59.587  | -6.482  | 5.018  | 1.00 | 37.78 |
| ATOM | 2929 | OH2 | TIP3 | 72  | 16.676  | -13.158 | -3.023 | 1.00 | 42.74 |
| ATOM | 2932 | OH2 | TIP3 | 73  | -15.177 | 7.529   | 4.524  | 1.00 | 19.90 |
| ATOM | 2935 | OH2 | TIP3 | 74  | 33.105  | 2.738   | 13.267 | 1.00 | 40.43 |
| ATOM | 2938 | OH2 | TIP3 | 75  | 0.334   | -2.795  | 10.999 | 1.00 | 31.20 |
| ATOM | 2941 | OH2 | TIP3 | 76  | 17.489  | 2.568   | 5.445  | 1.00 | 16.38 |
| ATOM | 2944 | OH2 | TIP3 | 77  | 27.373  | 3.870   | 6.168  | 1.00 | 39.52 |
| ATOM | 2947 | OH2 | TIP3 | 78  | -8.546  | 6.378   | 9.673  | 1.00 | 17.89 |
| ATOM | 2950 | OH2 | TIP3 | 79  | 1.508   | -1.891  | 8.809  | 1.00 | 33.71 |
| ATOM | 2953 | OH2 | TIP3 | 80  | -4.985  | -3.024  | 6.965  | 1.00 | 29.65 |
| ATOM | 2956 | OH2 | TIP3 | 81  | 17.673  | 3.019   | 1.736  | 1.00 | 22.73 |
| ATOM | 2959 | OH2 | TIP3 | 82  | 20.319  | 3.536   | 2.883  | 1.00 | 20.39 |
| ATOM | 2962 | OH2 | TIP3 | 83  | 0.366   | -2.419  | 22.243 | 1.00 | 22.15 |
| ATOM | 2965 | OH2 | TIP3 | 84  | 19.688  | -6.134  | -1.678 | 1.00 | 13.22 |
| ATOM | 2968 | OH2 | TIP3 | 85  | 10.581  | -15.481 | 6.681  | 1.00 | 43.14 |
| ATOM | 2971 | OH2 | TIP3 | 86  | 4.476   | -12.368 | 11.861 | 1.00 | 38.38 |
| ATOM | 2974 | OH2 | TIP3 | 87  | 6.421   | 1.053   | -3.368 | 1.00 | 21.50 |
| ATOM | 2977 | OH2 | TIP3 | 88  | -13.766 | 1.683   | 5.565  | 1.00 | 39.45 |
| ATOM | 2980 | OH2 | TIP3 | 89  | 15.689  | -7.291  | -0.140 | 1.00 | 30.27 |
| ATOM | 2983 | OH2 | TIP3 | 90  | -1.762  | -5.389  | 3.937  | 1.00 | 31.03 |
| ATOM | 2986 | OH2 | TIP3 | 91  | 12.642  | 5.184   | -4.424 | 1.00 | 37.94 |
| ATOM | 2989 | OH2 | TIP3 | 92  | 69.601  | 27.513  | 2.309  | 1.00 | 44.71 |
| ATOM | 2992 | OH2 | TIP3 | 93  | 24.342  | -13.465 | -0.010 | 1.00 | 50.74 |
| ATOM | 2995 | OH2 | TIP3 | 94  | 60.354  | -4.675  | 33.978 | 1.00 | 38.15 |
| ATOM | 2998 | OH2 | TIP3 | 95  | 10.408  | 5.632   | 3.428  | 1.00 | 51.37 |
| ATOM | 3001 | OH2 | TIP3 | 96  | -9.676  | -3.916  | 4.621  | 1.00 | 34.12 |
| ATOM | 3004 | OH2 | TIP3 | 97  | 73.207  | -2.076  | 10.677 | 1.00 | 70.04 |
| ATOM | 3007 | OH2 | TIP3 | 98  | -3.042  | 5.487   | 30.579 | 1.00 | 30.78 |
| ATOM | 3010 | OH2 | TIP3 | 99  | 36.627  | 0.829   | 11.645 | 1.00 | 41.40 |
| ATOM | 3013 | OH2 | TIP3 | 100 | 21.685  | 6.318   | 16.814 | 1.00 | 20.93 |
| ATOM | 3016 | OH2 | TIP3 | 101 | 31.434  | 0.662   | 19.231 | 1.00 | 57.99 |
| ATOM | 3019 | OH2 | TIP3 | 102 | 5.793   | -8.713  | 22.177 | 1.00 | 54.77 |
| ATOM | 3022 | OH2 | TIP3 | 103 | -13.037 | 8.412   | 17.695 | 1.00 | 25.61 |

|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 3025 | OH2 | TIP3 | 104 | 26.597  | -10.647 | -1.184 | 1.00 | 25.85 |
| ATOM | 3028 | OH2 | TIP3 | 105 | 24.406  | 1.951   | 18.037 | 1.00 | 30.72 |
| ATOM | 3031 | OH2 | TIP3 | 106 | -1.809  | 12.914  | 3.754  | 1.00 | 43.57 |
| ATOM | 3034 | OH2 | TIP3 | 107 | 59.590  | 13.738  | 33.131 | 1.00 | 26.96 |
| ATOM | 3037 | OH2 | TIP3 | 108 | 4.442   | -11.011 | 1.724  | 1.00 | 46.96 |
| ATOM | 3040 | OH2 | TIP3 | 109 | 8.101   | 2.869   | 0.801  | 1.00 | 37.28 |
| ATOM | 3043 | OH2 | TIP3 | 110 | 76.065  | 1.631   | 26.158 | 1.00 | 46.49 |
| ATOM | 3046 | OH2 | TIP3 | 111 | 48.821  | 15.839  | 14.239 | 1.00 | 34.18 |
| ATOM | 3049 | OH2 | TIP3 | 112 | 2.703   | -11.324 | 8.959  | 1.00 | 39.16 |
| ATOM | 3052 | OH2 | TIP3 | 113 | 82.922  | 26.478  | 12.953 | 1.00 | 43.77 |
| ATOM | 3055 | OH2 | TIP3 | 114 | 8.998   | -6.359  | -3.309 | 1.00 | 39.51 |
| ATOM | 3058 | OH2 | TIP3 | 115 | -8.590  | 4.563   | 4.397  | 1.00 | 32.53 |
| ATOM | 3061 | OH2 | TIP3 | 116 | 8.115   | -13.800 | 8.351  | 1.00 | 41.64 |
| ATOM | 3064 | OH2 | TIP3 | 117 | 51.643  | 6.187   | 10.821 | 1.00 | 31.70 |
| ATOM | 3067 | OH2 | TIP3 | 118 | 20.737  | 3.915   | 15.522 | 1.00 | 17.40 |
| ATOM | 3070 | OH2 | TIP3 | 119 | 73.254  | 3.698   | 20.947 | 1.00 | 27.49 |
| ATOM | 3073 | OH2 | TIP3 | 120 | 5.343   | -11.780 | 22.588 | 1.00 | 36.63 |
| ATOM | 3076 | OH2 | TIP3 | 121 | 34.390  | 2.307   | 16.660 | 1.00 | 64.04 |
| ATOM | 3079 | OH2 | TIP3 | 122 | 9.552   | -11.846 | 6.934  | 1.00 | 28.23 |
| ATOM | 3082 | OH2 | TIP3 | 123 | 8.463   | 4.098   | -1.454 | 1.00 | 30.21 |
| ATOM | 3085 | OH2 | TIP3 | 124 | 7.397   | 6.952   | 2.826  | 1.00 | 33.87 |
| ATOM | 3088 | OH2 | TIP3 | 125 | 35.796  | -1.428  | 0.072  | 1.00 | 30.27 |
| ATOM | 3091 | OH2 | TIP3 | 126 | 45.044  | 10.052  | 11.102 | 1.00 | 28.75 |
| ATOM | 3094 | OH2 | TIP3 | 127 | 45.209  | 11.756  | 21.279 | 1.00 | 31.80 |
| ATOM | 3097 | OH2 | TIP3 | 128 | -2.800  | 15.170  | 16.902 | 1.00 | 32.72 |
| ATOM | 3100 | OH2 | TIP3 | 129 | 85.885  | 11.248  | 9.428  | 1.00 | 25.28 |
| ATOM | 3103 | OH2 | TIP3 | 130 | 13.136  | -2.420  | 1.867  | 1.00 | 20.56 |
| ATOM | 3106 | OH2 | TIP3 | 131 | 75.900  | 3.542   | 20.641 | 1.00 | 39.79 |
| ATOM | 3109 | OH2 | TIP3 | 132 | 13.075  | 7.580   | -2.817 | 1.00 | 34.49 |
| ATOM | 3112 | OH2 | TIP3 | 133 | 11.166  | -10.189 | 0.573  | 1.00 | 36.71 |
| ATOM | 3115 | OH2 | TIP3 | 134 | 13.814  | -16.459 | 3.327  | 1.00 | 21.18 |
| ATOM | 3118 | OH2 | TIP3 | 135 | -6.419  | -3.460  | 16.599 | 1.00 | 32.62 |
| ATOM | 3121 | OH2 | TIP3 | 136 | 25.578  | -12.834 | 3.624  | 1.00 | 43.32 |
| ATOM | 3124 | OH2 | TIP3 | 137 | -16.472 | 11.136  | 6.388  | 1.00 | 64.77 |
| ATOM | 3127 | OH2 | TIP3 | 138 | 86.531  | 12.711  | 7.151  | 1.00 | 28.72 |
| ATOM | 3130 | OH2 | TIP3 | 139 | 32.292  | -4.665  | 1.511  | 1.00 | 30.98 |
| ATOM | 3133 | OH2 | TIP3 | 140 | 45.116  | 7.369   | 11.774 | 1.00 | 30.59 |
| ATOM | 3136 | OH2 | TIP3 | 141 | 81.035  | 12.317  | 16.907 | 1.00 | 41.72 |
| ATOM | 3139 | OH2 | TIP3 | 142 | 2.905   | -7.019  | -2.101 | 1.00 | 26.20 |
| ATOM | 3142 | OH2 | TIP3 | 143 | 31.895  | -6.253  | 20.885 | 1.00 | 36.12 |
| ATOM | 3145 | OH2 | TIP3 | 144 | 74.974  | -2.640  | 12.464 | 1.00 | 58.90 |
| ATOM | 3148 | OH2 | TIP3 | 145 | 7.514   | 6.734   | -1.116 | 1.00 | 37.81 |
| ATOM | 3151 | OH2 | TIP3 | 146 | 71.606  | 5.595   | 22.198 | 1.00 | 54.82 |
| ATOM | 3154 | OH2 | TIP3 | 147 | 68.337  | -5.037  | 8.955  | 1.00 | 40.80 |
| ATOM | 3157 | OH2 | TIP3 | 148 | 0.191   | -9.669  | 6.903  | 1.00 | 47.40 |
| ATOM | 3160 | OH2 | TIP3 | 149 | 68.043  | 18.153  | 10.710 | 1.00 | 36.67 |
| ATOM | 3163 | OH2 | TIP3 | 150 | 3.644   | 8.512   | 4.478  | 1.00 | 40.16 |
| ATOM | 3166 | OH2 | TIP3 | 151 | 52.117  | 11.302  | 18.644 | 1.00 | 40.22 |
| ATOM | 3169 | OH2 | TIP3 | 152 | -10.220 | 6.750   | 4.981  | 1.00 | 25.00 |
| ATOM | 3172 | OH2 | TIP3 | 153 | 76.944  | 1.425   | -0.793 | 1.00 | 46.95 |
| ATOM | 3175 | OH2 | TIP3 | 154 | 10.053  | -11.958 | 17.014 | 1.00 | 38.99 |
| ATOM | 3178 | OH2 | TIP3 | 155 | 34.348  | 14.128  | 18.169 | 1.00 | 42.98 |

|      |      |     |      |     |         |         |        |      |       |
|------|------|-----|------|-----|---------|---------|--------|------|-------|
| ATOM | 3181 | OH2 | TIP3 | 156 | 2.472   | -8.230  | 16.629 | 1.00 | 39.28 |
| ATOM | 3184 | OH2 | TIP3 | 157 | 29.861  | 1.764   | 5.993  | 1.00 | 36.29 |
| ATOM | 3187 | OH2 | TIP3 | 158 | 32.608  | -17.351 | 11.473 | 1.00 | 59.48 |
| ATOM | 3190 | OH2 | TIP3 | 159 | 42.408  | 18.047  | 11.188 | 1.00 | 39.61 |
| ATOM | 3193 | OH2 | TIP3 | 160 | 88.019  | 10.498  | 5.885  | 1.00 | 57.85 |
| ATOM | 3196 | OH2 | TIP3 | 161 | 70.091  | -4.165  | 25.232 | 1.00 | 64.48 |
| ATOM | 3199 | OH2 | TIP3 | 162 | 77.332  | 5.434   | 24.000 | 1.00 | 55.68 |
| ATOM | 3202 | OH2 | TIP3 | 163 | -0.743  | -8.232  | 4.456  | 1.00 | 61.30 |
| ATOM | 3205 | OH2 | TIP3 | 164 | 34.224  | 15.617  | 1.556  | 1.00 | 36.76 |
| ATOM | 3208 | OH2 | TIP3 | 165 | -9.619  | 7.593   | 7.404  | 1.00 | 36.55 |
| ATOM | 3211 | OH2 | TIP3 | 166 | 11.725  | 5.841   | 7.590  | 1.00 | 33.56 |
| ATOM | 3214 | OH2 | TIP3 | 167 | -8.492  | 14.057  | 13.866 | 1.00 | 43.88 |
| ATOM | 3217 | OH2 | TIP3 | 168 | 32.082  | 3.374   | 18.430 | 1.00 | 50.87 |
| ATOM | 3220 | OH2 | TIP3 | 169 | -8.471  | 9.925   | 24.255 | 1.00 | 41.24 |
| ATOM | 3223 | OH2 | TIP3 | 170 | -1.100  | -6.507  | 15.528 | 1.00 | 31.24 |
| ATOM | 3226 | OH2 | TIP3 | 171 | 80.411  | 0.680   | 15.823 | 1.00 | 49.76 |
| ATOM | 3229 | OH2 | TIP3 | 172 | 67.266  | 20.862  | -1.548 | 1.00 | 43.71 |
| ATOM | 3232 | OH2 | TIP3 | 173 | -0.460  | 4.230   | 1.362  | 1.00 | 29.46 |
| ATOM | 3235 | OH2 | TIP3 | 174 | -0.107  | 6.721   | 2.716  | 1.00 | 34.57 |
| ATOM | 3238 | OH2 | TIP3 | 175 | -0.955  | 8.958   | 1.388  | 1.00 | 37.76 |
| ATOM | 3241 | OH2 | TIP3 | 176 | -5.269  | 9.229   | 2.243  | 1.00 | 38.77 |
| ATOM | 3244 | OH2 | TIP3 | 177 | -7.000  | 10.196  | 3.928  | 1.00 | 55.47 |
| ATOM | 3247 | OH2 | TIP3 | 178 | 2.919   | 7.005   | 0.987  | 1.00 | 46.54 |
| ATOM | 3250 | OH2 | TIP3 | 179 | 5.370   | 10.843  | 8.420  | 1.00 | 36.98 |
| ATOM | 3253 | OH2 | TIP3 | 180 | 63.828  | 12.793  | 22.770 | 1.00 | 63.91 |
| ATOM | 3256 | OH2 | TIP3 | 181 | 79.461  | 0.958   | 18.507 | 1.00 | 47.46 |
| ATOM | 3259 | OH2 | TIP3 | 182 | 59.131  | -11.907 | 7.222  | 1.00 | 51.47 |
| ATOM | 3262 | OH2 | TIP3 | 183 | 14.248  | -1.085  | -4.437 | 1.00 | 43.62 |
| ATOM | 3265 | OH2 | TIP3 | 184 | 59.294  | 2.993   | 33.283 | 1.00 | 56.42 |
| ATOM | 3268 | OH2 | TIP3 | 185 | 32.270  | 13.672  | 20.001 | 1.00 | 47.71 |
| ATOM | 3271 | OH2 | TIP3 | 186 | 72.089  | 16.139  | 22.904 | 1.00 | 49.99 |
| ATOM | 3274 | OH2 | TIP3 | 187 | 1.038   | -8.592  | 14.174 | 1.00 | 40.01 |
| ATOM | 3277 | OH2 | TIP3 | 188 | -0.484  | 5.267   | 30.679 | 1.00 | 48.08 |
| ATOM | 3280 | OH2 | TIP3 | 189 | 81.532  | 15.288  | 17.279 | 1.00 | 79.71 |
| ATOM | 3283 | OH2 | TIP3 | 190 | -17.528 | 3.859   | 24.112 | 1.00 | 56.21 |
| ATOM | 3286 | OH2 | TIP3 | 191 | 27.542  | 10.591  | 14.666 | 1.00 | 53.58 |
| ATOM | 3289 | OH2 | TIP3 | 192 | 34.962  | 4.381   | 27.739 | 1.00 | 60.92 |
| ATOM | 3292 | OH2 | TIP3 | 193 | -3.244  | -3.943  | 8.937  | 1.00 | 35.88 |
| ATOM | 3295 | OH2 | TIP3 | 194 | 42.673  | 7.836   | 22.289 | 1.00 | 37.44 |
| ATOM | 3298 | OH2 | TIP3 | 195 | 52.865  | 12.074  | 22.272 | 1.00 | 35.63 |
| ATOM | 3301 | OH2 | TIP3 | 196 | 26.791  | 13.926  | 19.808 | 1.00 | 76.14 |
| ATOM | 3304 | OH2 | TIP3 | 197 | -7.584  | 9.157   | 6.269  | 1.00 | 44.54 |
| ATOM | 3310 | OH2 | TIP3 | 198 | 55.298  | 15.955  | 20.455 | 1.00 | 50.69 |
| ATOM | 3313 | OH2 | TIP3 | 199 | 51.654  | 19.308  | 22.767 | 1.00 | 53.00 |
| ATOM | 3316 | OH2 | TIP3 | 200 | 20.092  | 7.039   | 7.056  | 1.00 | 32.98 |
| ATOM | 3319 | OH2 | TIP3 | 201 | 28.988  | 1.734   | -3.437 | 1.00 | 42.52 |
| ATOM | 3322 | OH2 | TIP3 | 202 | 26.359  | 2.749   | -4.689 | 1.00 | 43.12 |
| ATOM | 3325 | OH2 | TIP3 | 203 | 36.827  | 2.974   | 18.493 | 1.00 | 57.91 |
| ATOM | 3328 | OH2 | TIP3 | 204 | 17.012  | -20.743 | 13.983 | 1.00 | 62.01 |
| ATOM | 3331 | OH2 | TIP3 | 205 | 27.980  | -14.283 | 6.114  | 1.00 | 79.57 |
| ATOM | 3334 | OH2 | TIP3 | 206 | 31.396  | 1.595   | -1.941 | 1.00 | 53.29 |
| ATOM | 3337 | OH2 | TIP3 | 207 | 10.244  | -16.264 | 15.463 | 1.00 | 43.25 |



|      |      |     |      |      |         |         |        |      |       |
|------|------|-----|------|------|---------|---------|--------|------|-------|
| ATOM | 3340 | OH2 | TIP3 | 208  | 7.255   | -11.909 | 5.440  | 1.00 | 45.52 |
| ATOM | 3343 | OH2 | TIP3 | 209  | -12.421 | 14.520  | 11.103 | 1.00 | 56.32 |
| ATOM | 3346 | OH2 | TIP3 | 210  | 11.250  | 9.879   | -1.498 | 1.00 | 28.34 |
| ATOM | 3349 | OH2 | TIP3 | 211  | 11.426  | 12.574  | -1.341 | 1.00 | 37.79 |
| ATOM | 3352 | OH2 | TIP3 | 212  | 34.344  | 13.104  | -1.291 | 1.00 | 51.83 |
| ATOM | 3355 | OH2 | TIP3 | 213  | 31.230  | 18.082  | 8.054  | 1.00 | 44.77 |
| ATOM | 3358 | OH2 | TIP3 | 214  | 37.062  | 12.036  | -1.875 | 1.00 | 53.61 |
| ATOM | 3361 | OH2 | TIP3 | 215  | 35.231  | 3.150   | 10.692 | 1.00 | 60.59 |
| ATOM | 3364 | OH2 | TIP3 | 216  | 63.913  | 13.371  | 26.770 | 1.00 | 59.44 |
| ATOM | 3367 | OH2 | TIP3 | 217  | 36.511  | 6.165   | 15.409 | 1.00 | 70.98 |
| ATOM | 3370 | OH2 | TIP3 | 218  | 90.623  | 4.459   | 6.671  | 1.00 | 52.23 |
| ATOM | 3373 | OH2 | TIP3 | 219  | 49.822  | -11.758 | 10.881 | 1.00 | 46.12 |
| ATOM | 3376 | OH2 | TIP3 | 220  | 60.367  | -10.286 | 16.662 | 1.00 | 68.41 |
| ATOM | 3379 | OH2 | TIP3 | 221  | 17.954  | -21.378 | 7.048  | 1.00 | 68.51 |
| ATOM | 3382 | OH2 | TIP3 | 222  | 66.176  | -1.266  | 30.784 | 1.00 | 39.19 |
| ATOM | 3385 | OH2 | TIP3 | 223  | 75.201  | 19.402  | 20.800 | 1.00 | 43.98 |
| ATOM | 3388 | OH2 | TIP3 | 224  | -2.895  | 10.302  | 3.534  | 1.00 | 44.97 |
| ATOM | 3391 | OH2 | TIP3 | 225  | 6.045   | -4.015  | 25.279 | 1.00 | 63.74 |
| ATOM | 3394 | OH2 | TIP3 | 226  | 36.238  | 5.898   | 12.819 | 1.00 | 32.89 |
| ATOM | 3397 | OH2 | TIP3 | 227  | -5.516  | 16.713  | 14.089 | 1.00 | 51.60 |
| ATOM | 3400 | OH2 | TIP3 | 228  | 46.577  | -11.931 | 26.964 | 1.00 | 37.76 |
| ATOM | 3403 | OH2 | TIP3 | 229  | 6.496   | 6.048   | 13.722 | 1.00 | 27.51 |
| ATOM | 3406 | OH2 | TIP3 | 230  | -3.691  | -5.054  | 20.691 | 1.00 | 38.16 |
| ATOM | 3409 | OH2 | TIP3 | 231  | 1.811   | -3.444  | -0.149 | 1.00 | 54.03 |
| ATOM | 3412 | OH2 | TIP3 | 232  | 86.148  | 11.480  | 23.402 | 1.00 | 57.66 |
| ATOM | 3415 | OH2 | TIP3 | 233  | 10.549  | 7.581   | 5.716  | 1.00 | 48.49 |
| ATOM | 3421 | OH2 | TIP3 | 234  | 64.680  | -8.130  | 20.697 | 1.00 | 69.67 |
| ATOM | 3424 | OH2 | TIP3 | 235  | 11.380  | -17.736 | 13.500 | 1.00 | 54.61 |
| ATOM | 3427 | OH2 | TIP3 | 236  | 3.136   | -4.782  | 21.980 | 1.00 | 57.12 |
| ATOM | 3430 | OH2 | TIP3 | 237  | 72.296  | 1.006   | -1.987 | 1.00 | 41.40 |
| ATOM | 3433 | OH2 | TIP3 | 238  | 50.258  | -3.179  | 32.723 | 1.00 | 74.99 |
| ATOM | 3436 | OH2 | TIP3 | 239  | 58.051  | 9.469   | 11.776 | 1.00 | 44.10 |
| ATOM | 3439 | OH2 | TIP3 | 240  | 43.530  | 20.498  | 30.344 | 1.00 | 43.69 |
| ATOM | 3442 | OH2 | TIP3 | 241  | 67.081  | 16.597  | 15.934 | 1.00 | 45.80 |
| ATOM | 3445 | OH2 | TIP3 | 242  | 87.660  | 21.694  | 5.373  | 1.00 | 50.39 |
| ATOM | 3448 | OH2 | TIP3 | 243  | 71.779  | 28.586  | 7.932  | 1.00 | 61.12 |
| ATOM | 3451 | OH2 | TIP3 | 244  | 25.965  | -8.124  | 27.084 | 1.00 | 42.13 |
| ATOM | 3454 | OH2 | TIP3 | 245  | -18.336 | 10.487  | 12.859 | 1.00 | 73.36 |
| ATOM | 3457 | OH2 | TIP3 | 246  | 30.703  | 11.410  | 16.381 | 1.00 | 39.24 |
| ATOM | 3460 | OH2 | TIP3 | 247  | 22.617  | -16.025 | -2.906 | 1.00 | 63.22 |
| ATOM | 4620 | C   | SUG  | 1000 | 67.815  | 4.441   | 11.493 | 1.00 | 20.00 |
| ATOM | 4621 | C1  | SUG  | 1000 | 67.387  | 3.706   | 10.364 | 1.00 | 20.00 |
| ATOM | 4622 | N   | SUG  | 1000 | 67.823  | 2.445   | 9.937  | 1.00 | 20.00 |
| ATOM | 4623 | C2  | SUG  | 1000 | 66.401  | 4.224   | 9.501  | 1.00 | 20.00 |
| ATOM | 4624 | C3  | SUG  | 1000 | 65.825  | 5.499   | 9.765  | 1.00 | 20.00 |
| ATOM | 4625 | C4  | SUG  | 1000 | 66.259  | 6.212   | 10.884 | 1.00 | 20.00 |
| ATOM | 4626 | C5  | SUG  | 1000 | 67.239  | 5.690   | 11.736 | 1.00 | 20.00 |
| ATOM | 4627 | C6  | SUG  | 1000 | 66.155  | 3.220   | 8.401  | 1.00 | 20.00 |
| ATOM | 4628 | O   | SUG  | 1000 | 67.372  | 1.047   | 8.275  | 1.00 | 20.00 |
| ATOM | 4629 | C7  | SUG  | 1000 | 67.155  | 2.121   | 8.828  | 1.00 | 20.00 |
| ATOM | 4630 | C8  | SUG  | 1000 | 63.369  | 2.460   | 5.852  | 1.00 | 20.00 |
| ATOM | 4631 | C9  | SUG  | 1000 | 65.284  | 3.356   | 7.382  | 1.00 | 20.00 |

|      |      |     |     |      |        |       |        |      |       |
|------|------|-----|-----|------|--------|-------|--------|------|-------|
| ATOM | 4632 | C10 | SUG | 1000 | 64.603 | 2.300 | 6.514  | 1.00 | 20.00 |
| ATOM | 4633 | C11 | SUG | 1000 | 64.167 | 0.392 | 5.481  | 1.00 | 20.00 |
| ATOM | 4634 | C12 | SUG | 1000 | 63.106 | 1.251 | 5.206  | 1.00 | 20.00 |
| ATOM | 4635 | N13 | SUG | 1000 | 65.103 | 1.023 | 5.293  | 1.00 | 20.00 |
| ATOM | 4636 | C14 | SUG | 1000 | 61.898 | 0.897 | 4.346  | 1.00 | 20.00 |
| ATOM | 4637 | C15 | SUG | 1000 | 62.476 | 3.715 | 5.826  | 1.00 | 20.00 |
| ATOM | 4638 | C16 | SUG | 1000 | 61.259 | 3.598 | 6.771  | 1.00 | 20.00 |
| ATOM | 4639 | O1  | SUG | 1000 | 60.814 | 5.963 | 6.429  | 1.00 | 20.00 |
| ATOM | 4640 | C17 | SUG | 1000 | 60.520 | 4.912 | 6.988  | 1.00 | 20.00 |
| ATOM | 4641 | O2  | SUG | 1000 | 59.496 | 4.795 | 7.873  | 1.00 | 20.00 |
| ATOM | 4642 | C   | SUG | 1001 | 5.413  | 2.967 | 18.087 | 1.00 | 20.00 |
| ATOM | 4643 | C1  | SUG | 1001 | 5.891  | 2.927 | 19.417 | 1.00 | 20.00 |
| ATOM | 4644 | N   | SUG | 1001 | 5.553  | 2.021 | 20.431 | 1.00 | 20.00 |
| ATOM | 4645 | C2  | SUG | 1001 | 6.828  | 3.875 | 19.872 | 1.00 | 20.00 |
| ATOM | 4646 | C3  | SUG | 1001 | 7.304  | 4.884 | 18.988 | 1.00 | 20.00 |
| ATOM | 4647 | C4  | SUG | 1001 | 6.822  | 4.909 | 17.678 | 1.00 | 20.00 |
| ATOM | 4648 | C5  | SUG | 1001 | 5.890  | 3.964 | 17.233 | 1.00 | 20.00 |
| ATOM | 4649 | C6  | SUG | 1001 | 7.145  | 3.576 | 21.318 | 1.00 | 20.00 |
| ATOM | 4650 | O   | SUG | 1001 | 6.101  | 1.678 | 22.552 | 1.00 | 20.00 |
| ATOM | 4651 | C7  | SUG | 1001 | 6.237  | 2.343 | 21.530 | 1.00 | 20.00 |
| ATOM | 4652 | C8  | SUG | 1001 | 9.967  | 4.392 | 23.809 | 1.00 | 20.00 |
| ATOM | 4653 | C9  | SUG | 1001 | 7.997  | 4.264 | 22.102 | 1.00 | 20.00 |
| ATOM | 4654 | C10 | SUG | 1001 | 8.753  | 3.835 | 23.357 | 1.00 | 20.00 |
| ATOM | 4655 | C11 | SUG | 1001 | 9.331  | 2.736 | 25.189 | 1.00 | 20.00 |
| ATOM | 4656 | C12 | SUG | 1001 | 10.320 | 3.689 | 24.962 | 1.00 | 20.00 |
| ATOM | 4657 | N13 | SUG | 1001 | 8.354  | 2.808 | 24.203 | 1.00 | 20.00 |
| ATOM | 4658 | C14 | SUG | 1001 | 11.547 | 3.900 | 25.843 | 1.00 | 20.00 |
| ATOM | 4659 | C15 | SUG | 1001 | 10.759 | 5.550 | 23.175 | 1.00 | 20.00 |
| ATOM | 4660 | C16 | SUG | 1001 | 11.987 | 5.063 | 22.373 | 1.00 | 20.00 |
| ATOM | 4661 | O1  | SUG | 1001 | 12.243 | 7.308 | 21.475 | 1.00 | 20.00 |
| ATOM | 4662 | C17 | SUG | 1001 | 12.621 | 6.142 | 21.504 | 1.00 | 20.00 |
| ATOM | 4663 | O2  | SUG | 1001 | 13.657 | 5.670 | 20.762 | 1.00 | 20.00 |

TABLE 4

| Atom<br>No. | Atom<br>Type | A.A<br>Type | A.A<br>No. | X    | Y       | Z      | OCC    | B          |
|-------------|--------------|-------------|------------|------|---------|--------|--------|------------|
| ATOM        | 1            | N           | GLU        | 1464 | -13.576 | 17.066 | 8.598  | 1.00 57.39 |
| ATOM        | 2            | CA          | GLU        | 1464 | -12.446 | 17.198 | 7.684  | 1.00 55.83 |
| ATOM        | 3            | CB          | GLU        | 1464 | -11.381 | 18.127 | 8.275  | 1.00 56.73 |
| ATOM        | 4            | C           | GLU        | 1464 | -11.845 | 15.833 | 7.341  | 1.00 55.07 |
| ATOM        | 5            | O           | GLU        | 1464 | -11.722 | 15.504 | 6.165  | 1.00 59.74 |
| ATOM        | 6            | N           | LEU        | 1465 | -11.518 | 15.023 | 8.347  | 1.00 50.12 |
| ATOM        | 7            | CA          | LEU        | 1465 | -10.950 | 13.699 | 8.087  | 1.00 44.43 |
| ATOM        | 8            | CB          | LEU        | 1465 | -10.155 | 13.196 | 9.291  | 1.00 43.28 |
| ATOM        | 9            | CG          | LEU        | 1465 | -8.630  | 13.316 | 9.227  | 1.00 43.70 |
| ATOM        | 10           | CD1         | LEU        | 1465 | -8.222  | 14.754 | 9.013  | 1.00 47.59 |
| ATOM        | 11           | CD2         | LEU        | 1465 | -8.017  | 12.803 | 10.506 | 1.00 42.63 |
| ATOM        | 12           | C           | LEU        | 1465 | -12.046 | 12.697 | 7.739  | 1.00 40.93 |
| ATOM        | 13           | O           | LEU        | 1465 | -13.139 | 12.730 | 8.301  | 1.00 39.13 |
| ATOM        | 14           | N           | PRO        | 1466 | -11.794 | 11.852 | 6.726  | 1.00 40.49 |
| ATOM        | 15           | CD          | PRO        | 1466 | -10.612 | 11.884 | 5.844  | 1.00 39.07 |
| ATOM        | 16           | CA          | PRO        | 1466 | -12.754 | 10.831 | 6.284  | 1.00 40.14 |
| ATOM        | 17           | CB          | PRO        | 1466 | -12.152 | 10.331 | 4.981  | 1.00 40.90 |
| ATOM        | 18           | CG          | PRO        | 1466 | -10.664 | 10.518 | 5.202  | 1.00 41.39 |
| ATOM        | 19           | C           | PRO        | 1466 | -12.862 | 9.701  | 7.305  | 1.00 40.06 |
| ATOM        | 20           | O           | PRO        | 1466 | -11.857 | 9.290  | 7.883  | 1.00 40.71 |
| ATOM        | 21           | N           | GLU        | 1467 | -14.064 | 9.175  | 7.491  | 1.00 38.65 |
| ATOM        | 22           | CA          | GLU        | 1467 | -14.255 | 8.126  | 8.467  | 1.00 39.24 |
| ATOM        | 23           | CB          | GLU        | 1467 | -15.722 | 8.054  | 8.873  | 1.00 45.06 |
| ATOM        | 24           | CG          | GLU        | 1467 | -16.314 | 9.365  | 9.353  | 1.00 50.91 |
| ATOM        | 25           | CD          | GLU        | 1467 | -17.789 | 9.252  | 9.699  | 1.00 53.51 |
| ATOM        | 26           | OE1         | GLU        | 1467 | -18.379 | 8.170  | 9.504  | 1.00 54.15 |
| ATOM        | 27           | OE2         | GLU        | 1467 | -18.369 | 10.250 | 10.160 | 1.00 53.10 |
| ATOM        | 28           | C           | GLU        | 1467 | -13.808 | 6.777  | 7.914  | 1.00 36.09 |
| ATOM        | 29           | O           | GLU        | 1467 | -13.922 | 6.529  | 6.711  | 1.00 38.58 |
| ATOM        | 30           | N           | ASP        | 1468 | -13.272 | 5.929  | 8.791  | 1.00 30.71 |
| ATOM        | 31           | CA          | ASP        | 1468 | -12.839 | 4.592  | 8.407  | 1.00 28.23 |
| ATOM        | 32           | CB          | ASP        | 1468 | -11.328 | 4.515  | 8.186  | 1.00 25.51 |
| ATOM        | 33           | CG          | ASP        | 1468 | -10.885 | 3.207  | 7.529  | 1.00 27.68 |
| ATOM        | 34           | OD1         | ASP        | 1468 | -11.623 | 2.199  | 7.572  | 1.00 26.01 |
| ATOM        | 35           | OD2         | ASP        | 1468 | -9.777  | 3.187  | 6.962  | 1.00 28.87 |
| ATOM        | 36           | C           | ASP        | 1468 | -13.274 | 3.627  | 9.493  | 1.00 27.74 |
| ATOM        | 37           | O           | ASP        | 1468 | -12.570 | 3.405  | 10.493 | 1.00 25.83 |
| ATOM        | 38           | N           | PRO        | 1469 | -14.450 | 3.019  | 9.305  | 1.00 25.88 |
| ATOM        | 39           | CD          | PRO        | 1469 | -15.396 | 3.175  | 8.183  | 1.00 24.25 |
| ATOM        | 40           | CA          | PRO        | 1469 | -14.963 | 2.079  | 10.294 | 1.00 26.69 |
| ATOM        | 41           | CB          | PRO        | 1469 | -16.255 | 1.586  | 9.641  | 1.00 28.81 |
| ATOM        | 42           | CG          | PRO        | 1469 | -16.702 | 2.776  | 8.816  | 1.00 24.20 |
| ATOM        | 43           | C           | PRO        | 1469 | -14.012 | 0.925  | 10.625 | 1.00 27.51 |
| ATOM        | 44           | O           | PRO        | 1469 | -14.172 | 0.285  | 11.657 | 1.00 27.60 |
| ATOM        | 45           | N           | ARG        | 1470 | -13.075 | 0.642  | 9.720  | 1.00 26.49 |
| ATOM        | 46           | CA          | ARG        | 1470 | -12.108 | -0.435 | 9.935  | 1.00 27.60 |

|      |    |     |     |      |         |        |        |      |       |
|------|----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 47 | CB  | ARG | 1470 | -11.285 | -0.691 | 8.668  | 1.00 | 26.08 |
| ATOM | 48 | CG  | ARG | 1470 | -12.073 | -1.125 | 7.439  | 1.00 | 30.77 |
| ATOM | 49 | CD  | ARG | 1470 | -11.153 | -1.257 | 6.213  | 1.00 | 31.66 |
| ATOM | 50 | NE  | ARG | 1470 | -10.462 | 0.001  | 5.915  | 1.00 | 30.94 |
| ATOM | 51 | CZ  | ARG | 1470 | -9.577  | 0.167  | 4.941  | 1.00 | 33.30 |
| ATOM | 52 | NH1 | ARG | 1470 | -9.249  | -0.846 | 4.144  | 1.00 | 32.78 |
| ATOM | 53 | NH2 | ARG | 1470 | -8.990  | 1.346  | 4.779  | 1.00 | 27.16 |
| ATOM | 54 | C   | ARG | 1470 | -11.116 | -0.163 | 11.069 | 1.00 | 28.73 |
| ATOM | 55 | O   | ARG | 1470 | -10.588 | -1.091 | 11.673 | 1.00 | 27.30 |
| ATOM | 56 | N   | TRP | 1471 | -10.871 | 1.107  | 11.363 | 1.00 | 27.98 |
| ATOM | 57 | CA  | TRP | 1471 | -9.892  | 1.430  | 12.375 | 1.00 | 26.33 |
| ATOM | 58 | CB  | TRP | 1471 | -8.642  | 1.964  | 11.671 | 1.00 | 23.87 |
| ATOM | 59 | CG  | TRP | 1471 | -7.998  | 0.947  | 10.795 | 1.00 | 24.61 |
| ATOM | 60 | CD2 | TRP | 1471 | -7.110  | -0.104 | 11.205 | 1.00 | 23.32 |
| ATOM | 61 | CE2 | TRP | 1471 | -6.732  | -0.807 | 10.041 | 1.00 | 24.34 |
| ATOM | 62 | CE3 | TRP | 1471 | -6.589  | -0.509 | 12.438 | 1.00 | 21.39 |
| ATOM | 63 | CD1 | TRP | 1471 | -8.129  | 0.831  | 9.446  | 1.00 | 25.07 |
| ATOM | 64 | NE1 | TRP | 1471 | -7.369  | -0.220 | 8.980  | 1.00 | 26.82 |
| ATOM | 65 | CZ2 | TRP | 1471 | -5.860  | -1.898 | 10.083 | 1.00 | 23.12 |
| ATOM | 66 | CZ3 | TRP | 1471 | -5.722  | -1.589 | 12.473 | 1.00 | 21.02 |
| ATOM | 67 | CH2 | TRP | 1471 | -5.364  | -2.265 | 11.306 | 1.00 | 21.74 |
| ATOM | 68 | C   | TRP | 1471 | -10.292 | 2.384  | 13.478 | 1.00 | 26.93 |
| ATOM | 69 | O   | TRP | 1471 | -9.551  | 2.544  | 14.452 | 1.00 | 26.37 |
| ATOM | 70 | N   | GLU | 1472 | -11.464 | 2.975  | 13.364 | 1.00 | 26.40 |
| ATOM | 71 | CA  | GLU | 1472 | -11.909 | 3.959  | 14.341 | 1.00 | 27.12 |
| ATOM | 72 | CB  | GLU | 1472 | -13.168 | 4.674  | 13.821 | 1.00 | 28.25 |
| ATOM | 73 | CG  | GLU | 1472 | -13.497 | 6.026  | 14.498 | 1.00 | 27.47 |
| ATOM | 74 | CD  | GLU | 1472 | -12.611 | 7.180  | 14.042 | 1.00 | 24.64 |
| ATOM | 75 | OE1 | GLU | 1472 | -11.877 | 7.038  | 13.042 | 1.00 | 24.60 |
| ATOM | 76 | OE2 | GLU | 1472 | -12.658 | 8.247  | 14.683 | 1.00 | 23.70 |
| ATOM | 77 | C   | GLU | 1472 | -12.179 | 3.421  | 15.735 | 1.00 | 25.89 |
| ATOM | 78 | O   | GLU | 1472 | -12.795 | 2.373  | 15.891 | 1.00 | 27.74 |
| ATOM | 79 | N   | LEU | 1473 | -11.689 | 4.121  | 16.745 | 1.00 | 25.95 |
| ATOM | 80 | CA  | LEU | 1473 | -11.961 | 3.740  | 18.129 | 1.00 | 27.45 |
| ATOM | 81 | CB  | LEU | 1473 | -10.707 | 3.311  | 18.890 | 1.00 | 24.99 |
| ATOM | 82 | CG  | LEU | 1473 | -10.958 | 3.090  | 20.392 | 1.00 | 21.80 |
| ATOM | 83 | CD1 | LEU | 1473 | -11.551 | 1.696  | 20.627 | 1.00 | 20.63 |
| ATOM | 84 | CD2 | LEU | 1473 | -9.646  | 3.199  | 21.157 | 1.00 | 22.34 |
| ATOM | 85 | C   | LEU | 1473 | -12.478 | 5.008  | 18.752 | 1.00 | 29.33 |
| ATOM | 86 | O   | LEU | 1473 | -12.007 | 6.101  | 18.405 | 1.00 | 27.56 |
| ATOM | 87 | N   | PRO | 1474 | -13.529 | 4.896  | 19.585 | 1.00 | 30.07 |
| ATOM | 88 | CD  | PRO | 1474 | -14.380 | 3.704  | 19.737 | 1.00 | 29.18 |
| ATOM | 89 | CA  | PRO | 1474 | -14.124 | 6.051  | 20.267 | 1.00 | 29.03 |
| ATOM | 90 | CB  | PRO | 1474 | -15.266 | 5.406  | 21.062 | 1.00 | 26.83 |
| ATOM | 91 | CG  | PRO | 1474 | -15.701 | 4.307  | 20.158 | 1.00 | 26.35 |
| ATOM | 92 | C   | PRO | 1474 | -13.099 | 6.715  | 21.178 | 1.00 | 31.01 |
| ATOM | 93 | O   | PRO | 1474 | -12.310 | 6.042  | 21.850 | 1.00 | 33.14 |
| ATOM | 94 | N   | ARG | 1475 | -13.110 | 8.038  | 21.178 | 1.00 | 31.33 |
| ATOM | 95 | CA  | ARG | 1475 | -12.181 | 8.810  | 21.973 | 1.00 | 32.99 |
| ATOM | 96 | CB  | ARG | 1475 | -12.442 | 10.292 | 21.791 | 1.00 | 35.87 |
| ATOM | 97 | CG  | ARG | 1475 | -12.082 | 10.729 | 20.413 | 1.00 | 43.88 |
| ATOM | 98 | CD  | ARG | 1475 | -11.984 | 12.228 | 20.247 | 1.00 | 44.84 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 99  | NE  | ARG | 1475 | -11.665 | 12.499 | 18.846 | 1.00 | 48.59 |
| ATOM | 100 | CZ  | ARG | 1475 | -10.435 | 12.663 | 18.374 | 1.00 | 46.00 |
| ATOM | 101 | NH1 | ARG | 1475 | -9.400  | 12.618 | 19.202 | 1.00 | 46.56 |
| ATOM | 102 | NH2 | ARG | 1475 | -10.241 | 12.746 | 17.065 | 1.00 | 44.18 |
| ATOM | 103 | C   | ARG | 1475 | -12.175 | 8.456  | 23.442 | 1.00 | 35.47 |
| ATOM | 104 | O   | ARG | 1475 | -11.115 | 8.400  | 24.072 | 1.00 | 37.44 |
| ATOM | 105 | N   | ASP | 1476 | -13.347 | 8.134  | 23.974 | 1.00 | 35.04 |
| ATOM | 106 | CA  | ASP | 1476 | -13.468 | 7.800  | 25.380 | 1.00 | 34.30 |
| ATOM | 107 | CB  | ASP | 1476 | -14.940 | 7.853  | 25.797 | 1.00 | 36.89 |
| ATOM | 108 | CG  | ASP | 1476 | -15.796 | 6.818  | 25.089 | 1.00 | 38.67 |
| ATOM | 109 | OD1 | ASP | 1476 | -15.288 | 6.056  | 24.234 | 1.00 | 41.19 |
| ATOM | 110 | OD2 | ASP | 1476 | -16.995 | 6.758  | 25.406 | 1.00 | 48.08 |
| ATOM | 111 | C   | ASP | 1476 | -12.858 | 6.457  | 25.770 | 1.00 | 33.67 |
| ATOM | 112 | O   | ASP | 1476 | -12.830 | 6.109  | 26.949 | 1.00 | 36.57 |
| ATOM | 113 | N   | ARG | 1477 | -12.441 | 5.670  | 24.781 | 1.00 | 32.72 |
| ATOM | 114 | CA  | ARG | 1477 | -11.828 | 4.370  | 25.033 | 1.00 | 29.68 |
| ATOM | 115 | CB  | ARG | 1477 | -12.117 | 3.418  | 23.886 | 1.00 | 25.53 |
| ATOM | 116 | CG  | ARG | 1477 | -13.564 | 3.189  | 23.599 | 1.00 | 23.83 |
| ATOM | 117 | CD  | ARG | 1477 | -14.234 | 2.525  | 24.772 | 1.00 | 26.80 |
| ATOM | 118 | NE  | ARG | 1477 | -14.493 | 3.485  | 25.842 | 1.00 | 27.24 |
| ATOM | 119 | CZ  | ARG | 1477 | -14.818 | 3.145  | 27.085 | 1.00 | 27.41 |
| ATOM | 120 | NH1 | ARG | 1477 | -14.931 | 1.874  | 27.438 | 1.00 | 29.00 |
| ATOM | 121 | NH2 | ARG | 1477 | -15.005 | 4.095  | 27.985 | 1.00 | 25.85 |
| ATOM | 122 | C   | ARG | 1477 | -10.316 | 4.489  | 25.177 | 1.00 | 30.44 |
| ATOM | 123 | O   | ARG | 1477 | -9.616  | 3.515  | 25.461 | 1.00 | 32.78 |
| ATOM | 124 | N   | LEU | 1478 | -9.800  | 5.690  | 25.002 | 1.00 | 30.39 |
| ATOM | 125 | CA  | LEU | 1478 | -8.370  | 5.883  | 25.080 | 1.00 | 31.96 |
| ATOM | 126 | CB  | LEU | 1478 | -7.886  | 6.508  | 23.771 | 1.00 | 30.43 |
| ATOM | 127 | CG  | LEU | 1478 | -6.400  | 6.424  | 23.431 | 1.00 | 31.90 |
| ATOM | 128 | CD1 | LEU | 1478 | -5.939  | 4.964  | 23.382 | 1.00 | 28.92 |
| ATOM | 129 | CD2 | LEU | 1478 | -6.159  | 7.115  | 22.102 | 1.00 | 33.55 |
| ATOM | 130 | C   | LEU | 1478 | -7.974  | 6.757  | 26.265 | 1.00 | 33.60 |
| ATOM | 131 | O   | LEU | 1478 | -8.193  | 7.972  | 26.251 | 1.00 | 33.96 |
| ATOM | 132 | N   | VAL | 1479 | -7.416  | 6.140  | 27.305 | 1.00 | 33.54 |
| ATOM | 133 | CA  | VAL | 1479 | -6.974  | 6.902  | 28.468 | 1.00 | 32.52 |
| ATOM | 134 | CB  | VAL | 1479 | -7.085  | 6.089  | 29.757 | 1.00 | 32.76 |
| ATOM | 135 | CG1 | VAL | 1479 | -6.728  | 6.973  | 30.926 | 1.00 | 33.27 |
| ATOM | 136 | CG2 | VAL | 1479 | -8.493  | 5.537  | 29.913 | 1.00 | 30.15 |
| ATOM | 137 | C   | VAL | 1479 | -5.529  | 7.341  | 28.239 | 1.00 | 34.24 |
| ATOM | 138 | O   | VAL | 1479 | -4.581  | 6.546  | 28.350 | 1.00 | 32.24 |
| ATOM | 139 | N   | LEU | 1480 | -5.381  | 8.607  | 27.867 | 1.00 | 35.88 |
| ATOM | 140 | CA  | LEU | 1480 | -4.077  | 9.192  | 27.569 | 1.00 | 38.43 |
| ATOM | 141 | CB  | LEU | 1480 | -4.241  | 10.541 | 26.855 | 1.00 | 36.93 |
| ATOM | 142 | CG  | LEU | 1480 | -4.828  | 10.535 | 25.435 | 1.00 | 35.67 |
| ATOM | 143 | CD1 | LEU | 1480 | -4.762  | 11.952 | 24.907 | 1.00 | 32.47 |
| ATOM | 144 | CD2 | LEU | 1480 | -4.037  | 9.613  | 24.499 | 1.00 | 33.60 |
| ATOM | 145 | C   | LEU | 1480 | -3.144  | 9.324  | 28.768 | 1.00 | 39.70 |
| ATOM | 146 | O   | LEU | 1480 | -3.511  | 9.912  | 29.784 | 1.00 | 39.88 |
| ATOM | 147 | N   | GLY | 1481 | -1.912  | 8.842  | 28.610 | 1.00 | 39.70 |
| ATOM | 148 | CA  | GLY | 1481 | -0.960  | 8.896  | 29.700 | 1.00 | 41.31 |
| ATOM | 149 | C   | GLY | 1481 | 0.349   | 9.633  | 29.474 | 1.00 | 44.39 |
| ATOM | 150 | O   | GLY | 1481 | 0.429   | 10.626 | 28.744 | 1.00 | 45.69 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 151 | N   | LYS | 1482 | 1.389  | 9.122  | 30.124 | 1.00 | 44.73 |
| ATOM | 152 | CA  | LYS | 1482 | 2.728  | 9.700  | 30.069 | 1.00 | 46.91 |
| ATOM | 153 | CB  | LYS | 1482 | 3.649  | 8.934  | 31.023 | 1.00 | 51.20 |
| ATOM | 154 | CG  | LYS | 1482 | 5.135  | 9.056  | 30.744 | 1.00 | 57.10 |
| ATOM | 155 | CD  | LYS | 1482 | 5.878  | 7.826  | 31.248 | 1.00 | 60.81 |
| ATOM | 156 | CE  | LYS | 1482 | 5.430  | 6.567  | 30.515 | 1.00 | 61.24 |
| ATOM | 157 | NZ  | LYS | 1482 | 6.235  | 5.375  | 30.912 | 1.00 | 65.39 |
| ATOM | 158 | C   | LYS | 1482 | 3.370  | 9.782  | 28.681 | 1.00 | 46.09 |
| ATOM | 159 | O   | LYS | 1482 | 3.440  | 8.782  | 27.944 | 1.00 | 42.98 |
| ATOM | 160 | N   | PRO | 1483 | 3.886  | 10.969 | 28.324 | 1.00 | 46.65 |
| ATOM | 161 | CD  | PRO | 1483 | 3.910  | 12.184 | 29.152 | 1.00 | 46.11 |
| ATOM | 162 | CA  | PRO | 1483 | 4.536  | 11.212 | 27.036 | 1.00 | 45.96 |
| ATOM | 163 | CB  | PRO | 1483 | 5.015  | 12.660 | 27.172 | 1.00 | 43.59 |
| ATOM | 164 | CG  | PRO | 1483 | 4.041  | 13.253 | 28.122 | 1.00 | 45.37 |
| ATOM | 165 | C   | PRO | 1483 | 5.739  | 10.279 | 26.912 | 1.00 | 46.43 |
| ATOM | 166 | O   | PRO | 1483 | 6.506  | 10.139 | 27.861 | 1.00 | 44.77 |
| ATOM | 167 | N   | LEU | 1484 | 5.844  | 9.579  | 25.786 | 1.00 | 48.21 |
| ATOM | 168 | CA  | LEU | 1484 | 6.978  | 8.684  | 25.554 | 1.00 | 50.46 |
| ATOM | 169 | CB  | LEU | 1484 | 6.543  | 7.426  | 24.811 | 1.00 | 49.38 |
| ATOM | 170 | CG  | LEU | 1484 | 5.655  | 6.437  | 25.576 | 1.00 | 50.15 |
| ATOM | 171 | CD1 | LEU | 1484 | 5.067  | 5.422  | 24.615 | 1.00 | 44.90 |
| ATOM | 172 | CD2 | LEU | 1484 | 6.446  | 5.750  | 26.669 | 1.00 | 44.60 |
| ATOM | 173 | C   | LEU | 1484 | 8.058  | 9.419  | 24.764 | 1.00 | 53.33 |
| ATOM | 174 | O   | LEU | 1484 | 9.241  | 9.115  | 24.896 | 1.00 | 51.94 |
| ATOM | 175 | N   | GLY | 1485 | 7.643  | 10.376 | 23.931 | 1.00 | 57.68 |
| ATOM | 176 | CA  | GLY | 1485 | 8.603  | 11.140 | 23.149 | 1.00 | 60.27 |
| ATOM | 177 | C   | GLY | 1485 | 7.997  | 11.946 | 22.016 | 1.00 | 62.66 |
| ATOM | 178 | O   | GLY | 1485 | 6.774  | 12.090 | 21.924 | 1.00 | 64.91 |
| ATOM | 179 | N   | GLN | 1491 | 4.704  | 14.425 | 13.904 | 1.00 | 47.86 |
| ATOM | 180 | CA  | GLN | 1491 | 4.339  | 13.868 | 20.206 | 1.00 | 44.42 |
| ATOM | 181 | CB  | GLN | 1491 | 3.373  | 14.829 | 20.918 | 1.00 | 44.31 |
| ATOM | 182 | C   | GLN | 1491 | 3.755  | 12.433 | 20.170 | 1.00 | 43.09 |
| ATOM | 183 | O   | GLN | 1491 | 2.807  | 12.150 | 19.426 | 1.00 | 43.67 |
| ATOM | 184 | N   | VAL | 1492 | 4.338  | 11.542 | 20.974 | 1.00 | 40.40 |
| ATOM | 185 | CA  | VAL | 1492 | 3.903  | 10.143 | 21.101 | 1.00 | 39.95 |
| ATOM | 186 | CB  | VAL | 1492 | 4.962  | 9.119  | 20.673 | 1.00 | 37.64 |
| ATOM | 187 | CG1 | VAL | 1492 | 4.416  | 7.721  | 20.897 | 1.00 | 34.94 |
| ATOM | 188 | CG2 | VAL | 1492 | 5.336  | 9.296  | 19.233 | 1.00 | 40.26 |
| ATOM | 189 | C   | VAL | 1492 | 3.720  | 9.905  | 22.586 | 1.00 | 40.23 |
| ATOM | 190 | O   | VAL | 1492 | 4.679  | 10.038 | 23.355 | 1.00 | 40.41 |
| ATOM | 191 | N   | VAL | 1493 | 2.516  | 9.518  | 22.993 | 1.00 | 38.15 |
| ATOM | 192 | CA  | VAL | 1493 | 2.250  | 9.291  | 24.405 | 1.00 | 37.11 |
| ATOM | 193 | CB  | VAL | 1493 | 1.131  | 10.245 | 24.924 | 1.00 | 37.83 |
| ATOM | 194 | CG1 | VAL | 1493 | 1.386  | 11.656 | 24.422 | 1.00 | 36.45 |
| ATOM | 195 | CG2 | VAL | 1493 | -0.252 | 9.769  | 24.508 | 1.00 | 39.28 |
| ATOM | 196 | C   | VAL | 1493 | 1.854  | 7.844  | 24.701 | 1.00 | 36.02 |
| ATOM | 197 | O   | VAL | 1493 | 1.450  | 7.118  | 23.797 | 1.00 | 37.17 |
| ATOM | 198 | N   | LEU | 1494 | 2.052  | 7.418  | 25.944 | 1.00 | 32.77 |
| ATOM | 199 | CA  | LEU | 1494 | 1.645  | 6.081  | 26.335 | 1.00 | 30.87 |
| ATOM | 200 | CB  | LEU | 1494 | 2.445  | 5.587  | 27.550 | 1.00 | 27.22 |
| ATOM | 201 | CG  | LEU | 1494 | 1.970  | 4.250  | 28.141 | 1.00 | 28.67 |
| ATOM | 202 | CD1 | LEU | 1494 | 2.124  | 3.132  | 27.129 | 1.00 | 27.40 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 203 | CD2 | LEU | 1494 | 2.736   | 3.904  | 29.377 | 1.00 | 28.84 |
| ATOM | 204 | C   | LEU | 1494 | 0.173   | 6.256  | 26.701 | 1.00 | 31.18 |
| ATOM | 205 | O   | LEU | 1494 | -0.249  | 7.344  | 27.119 | 1.00 | 30.88 |
| ATOM | 206 | N   | ALA | 1495 | -0.626  | 5.223  | 26.477 | 1.00 | 30.40 |
| ATOM | 207 | CA  | ALA | 1495 | -2.044  | 5.307  | 26.817 | 1.00 | 28.30 |
| ATOM | 208 | CB  | ALA | 1495 | -2.815  | 5.999  | 25.691 | 1.00 | 27.35 |
| ATOM | 209 | C   | ALA | 1495 | -2.608  | 3.919  | 27.057 | 1.00 | 26.32 |
| ATOM | 210 | O   | ALA | 1495 | -1.926  | 2.915  | 26.846 | 1.00 | 24.54 |
| ATOM | 211 | N   | GLU | 1496 | -3.836  | 3.867  | 27.552 | 1.00 | 28.11 |
| ATOM | 212 | CA  | GLU | 1496 | -4.514  | 2.603  | 27.793 | 1.00 | 29.22 |
| ATOM | 213 | CB  | GLU | 1496 | -4.841  | 2.441  | 29.272 | 1.00 | 31.77 |
| ATOM | 214 | CG  | GLU | 1496 | -3.627  | 2.233  | 30.140 | 1.00 | 37.26 |
| ATOM | 215 | CD  | GLU | 1496 | -3.950  | 2.405  | 31.613 | 1.00 | 39.77 |
| ATOM | 216 | OE1 | GLU | 1496 | -4.322  | 3.534  | 31.999 | 1.00 | 37.54 |
| ATOM | 217 | OE2 | GLU | 1496 | -3.835  | 1.417  | 32.378 | 1.00 | 41.52 |
| ATOM | 218 | C   | GLU | 1496 | -5.799  | 2.594  | 26.970 | 1.00 | 29.76 |
| ATOM | 219 | O   | GLU | 1496 | -6.593  | 3.543  | 27.020 | 1.00 | 31.39 |
| ATOM | 220 | N   | ALA | 1497 | -5.961  | 1.561  | 26.153 | 1.00 | 29.55 |
| ATOM | 221 | CA  | ALA | 1497 | -7.139  | 1.426  | 25.324 | 1.00 | 28.69 |
| ATOM | 222 | CB  | ALA | 1497 | -6.742  | 0.969  | 23.930 | 1.00 | 23.86 |
| ATOM | 223 | C   | ALA | 1497 | -8.068  | 0.418  | 25.965 | 1.00 | 29.51 |
| ATOM | 224 | O   | ALA | 1497 | -7.657  | -0.702 | 26.278 | 1.00 | 30.40 |
| ATOM | 225 | N   | ILE | 1498 | -9.313  | 0.823  | 26.201 | 1.00 | 31.33 |
| ATOM | 226 | CA  | ILE | 1498 | -10.302 | -0.064 | 26.811 | 1.00 | 32.30 |
| ATOM | 227 | CB  | ILE | 1498 | -11.359 | 0.727  | 27.619 | 1.00 | 33.61 |
| ATOM | 228 | CG2 | ILE | 1498 | -12.233 | -0.246 | 28.439 | 1.00 | 34.55 |
| ATOM | 229 | CG1 | ILE | 1498 | -10.690 | 1.745  | 28.545 | 1.00 | 31.99 |
| ATOM | 230 | CD1 | ILE | 1498 | -11.663 | 2.730  | 29.155 | 1.00 | 26.68 |
| ATOM | 231 | C   | ILE | 1498 | -11.023 | -0.777 | 25.673 | 1.00 | 32.69 |
| ATOM | 232 | O   | ILE | 1498 | -11.644 | -0.134 | 24.838 | 1.00 | 32.03 |
| ATOM | 233 | N   | GLY | 1499 | -10.917 | -2.095 | 25.610 | 1.00 | 37.34 |
| ATOM | 234 | CA  | GLY | 1499 | -11.588 | -2.822 | 24.554 | 1.00 | 44.45 |
| ATOM | 235 | C   | GLY | 1499 | -10.709 | -3.193 | 23.372 | 1.00 | 50.75 |
| ATOM | 236 | O   | GLY | 1499 | -9.993  | -4.205 | 23.438 | 1.00 | 53.68 |
| ATOM | 237 | N   | LEU | 1500 | -10.729 | -2.370 | 22.321 | 1.00 | 51.14 |
| ATOM | 238 | CA  | LEU | 1500 | -9.963  | -2.613 | 21.087 | 1.00 | 51.15 |
| ATOM | 239 | CB  | LEU | 1500 | -8.445  | -2.677 | 21.345 | 1.00 | 50.85 |
| ATOM | 240 | CG  | LEU | 1500 | -7.516  | -1.463 | 21.166 | 1.00 | 49.05 |
| ATOM | 241 | CD1 | LEU | 1500 | -6.082  | -1.946 | 21.263 | 1.00 | 44.92 |
| ATOM | 242 | CD2 | LEU | 1500 | -7.703  | -0.783 | 19.824 | 1.00 | 44.03 |
| ATOM | 243 | C   | LEU | 1500 | -10.420 | -3.891 | 20.376 | 1.00 | 50.50 |
| ATOM | 244 | O   | LEU | 1500 | -10.544 | -4.966 | 20.984 | 1.00 | 49.92 |
| ATOM | 245 | N   | PRO | 1505 | -13.321 | -5.777 | 25.373 | 1.00 | 48.57 |
| ATOM | 246 | CD  | PRO | 1505 | -13.937 | -7.111 | 25.286 | 1.00 | 50.09 |
| ATOM | 247 | CA  | PRO | 1505 | -14.289 | -4.776 | 25.848 | 1.00 | 46.31 |
| ATOM | 248 | CB  | PRO | 1505 | -15.630 | -5.503 | 25.710 | 1.00 | 45.25 |
| ATOM | 249 | CG  | PRO | 1505 | -15.271 | -6.918 | 26.025 | 1.00 | 48.85 |
| ATOM | 250 | C   | PRO | 1505 | -14.010 | -4.321 | 27.294 | 1.00 | 43.31 |
| ATOM | 251 | O   | PRO | 1505 | -14.001 | -3.122 | 27.571 | 1.00 | 42.84 |
| ATOM | 252 | N   | ASN | 1506 | -13.712 | -5.272 | 28.178 | 1.00 | 40.46 |
| ATOM | 253 | CA  | ASN | 1506 | -13.430 | -4.945 | 29.571 | 1.00 | 42.33 |
| ATOM | 254 | CB  | ASN | 1506 | -14.302 | -5.776 | 30.512 | 1.00 | 43.55 |

|      |     |     |     |      |         |         |        |      |       |
|------|-----|-----|-----|------|---------|---------|--------|------|-------|
| ATOM | 255 | CG  | ASN | 1506 | -15.760 | -5.436  | 30.382 | 1.00 | 42.68 |
| ATOM | 256 | OD1 | ASN | 1506 | -16.141 | -4.269  | 30.316 | 1.00 | 47.11 |
| ATOM | 257 | ND2 | ASN | 1506 | -16.591 | -6.461  | 30.323 | 1.00 | 45.66 |
| ATOM | 258 | C   | ASN | 1506 | -11.962 | -5.097  | 29.957 | 1.00 | 42.89 |
| ATOM | 259 | O   | ASN | 1506 | -11.617 | -5.221  | 31.137 | 1.00 | 43.23 |
| ATOM | 260 | N   | ARG | 1507 | -11.099 | -5.066  | 28.949 | 1.00 | 42.72 |
| ATOM | 261 | CA  | ARG | 1507 | -9.661  | -5.186  | 29.145 | 1.00 | 42.24 |
| ATOM | 262 | CB  | ARG | 1507 | -9.144  | -6.384  | 28.353 | 1.00 | 50.39 |
| ATOM | 263 | CG  | ARG | 1507 | -9.407  | -7.728  | 28.992 | 1.00 | 60.88 |
| ATOM | 264 | CD  | ARG | 1507 | -8.357  | -8.063  | 30.038 | 1.00 | 67.47 |
| ATOM | 265 | NE  | ARG | 1507 | -8.566  | -9.401  | 30.574 | 1.00 | 74.19 |
| ATOM | 266 | CZ  | ARG | 1507 | -8.012  | -9.861  | 31.691 | 1.00 | 79.97 |
| ATOM | 267 | NH1 | ARG | 1507 | -7.193  | -9.093  | 32.406 | 1.00 | 81.67 |
| ATOM | 268 | NH2 | ARG | 1507 | -8.338  | -11.068 | 32.134 | 1.00 | 82.38 |
| ATOM | 269 | C   | ARG | 1507 | -8.982  | -3.940  | 28.611 | 1.00 | 38.15 |
| ATOM | 270 | O   | ARG | 1507 | -9.458  | -3.354  | 27.642 | 1.00 | 36.46 |
| ATOM | 271 | N   | VAL | 1508 | -7.927  | -3.491  | 29.279 | 1.00 | 35.19 |
| ATOM | 272 | CA  | VAL | 1508 | -7.190  | -2.335  | 28.782 | 1.00 | 33.82 |
| ATOM | 273 | CB  | VAL | 1508 | -6.824  | -1.296  | 29.883 | 1.00 | 30.19 |
| ATOM | 274 | CG1 | VAL | 1508 | -8.072  | -0.723  | 30.498 | 1.00 | 34.68 |
| ATOM | 275 | CG2 | VAL | 1508 | -5.948  | -1.900  | 30.938 | 1.00 | 28.53 |
| ATOM | 276 | C   | VAL | 1508 | -5.912  | -2.869  | 28.155 | 1.00 | 33.91 |
| ATOM | 277 | O   | VAL | 1508 | -5.392  | -3.926  | 28.555 | 1.00 | 34.02 |
| ATOM | 278 | N   | THR | 1509 | -5.427  | -2.152  | 27.154 | 1.00 | 31.32 |
| ATOM | 279 | CA  | THR | 1509 | -4.206  | -2.527  | 26.476 | 1.00 | 30.47 |
| ATOM | 280 | CB  | THR | 1509 | -4.492  | -3.015  | 25.031 | 1.00 | 30.88 |
| ATOM | 281 | OG1 | THR | 1509 | -5.522  | -4.008  | 25.066 | 1.00 | 33.90 |
| ATOM | 282 | CG2 | THR | 1509 | -3.255  | -3.648  | 24.411 | 1.00 | 24.49 |
| ATOM | 283 | C   | THR | 1509 | -3.323  | -1.300  | 26.419 | 1.00 | 28.74 |
| ATOM | 284 | O   | THR | 1509 | -3.774  | -0.219  | 26.039 | 1.00 | 27.29 |
| ATOM | 285 | N   | LYS | 1510 | -2.092  | -1.432  | 26.893 | 1.00 | 29.17 |
| ATOM | 286 | CA  | LYS | 1510 | -1.162  | -0.325  | 26.831 | 1.00 | 30.55 |
| ATOM | 287 | CB  | LYS | 1510 | 0.092   | -0.595  | 27.648 | 1.00 | 27.23 |
| ATOM | 288 | CG  | LYS | 1510 | -0.117  | -0.460  | 29.135 | 1.00 | 34.33 |
| ATOM | 289 | CD  | LYS | 1510 | 1.191   | -0.614  | 29.896 | 1.00 | 40.49 |
| ATOM | 290 | CE  | LYS | 1510 | 1.065   | -1.603  | 31.062 | 1.00 | 48.28 |
| ATOM | 291 | NZ  | LYS | 1510 | 0.318   | -1.067  | 32.245 | 1.00 | 51.03 |
| ATOM | 292 | C   | LYS | 1510 | -0.813  | -0.213  | 25.355 | 1.00 | 29.64 |
| ATOM | 293 | O   | LYS | 1510 | -0.521  | -1.218  | 24.700 | 1.00 | 28.00 |
| ATOM | 294 | N   | VAL | 1511 | -0.904  | 1.004   | 24.836 | 1.00 | 30.10 |
| ATOM | 295 | CA  | VAL | 1511 | -0.625  | 1.305   | 23.446 | 1.00 | 30.13 |
| ATOM | 296 | CB  | VAL | 1511 | -1.951  | 1.464   | 22.636 | 1.00 | 31.39 |
| ATOM | 297 | CG1 | VAL | 1511 | -2.719  | 0.143   | 22.615 | 1.00 | 30.42 |
| ATOM | 298 | CG2 | VAL | 1511 | -2.829  | 2.629   | 23.223 | 1.00 | 28.08 |
| ATOM | 299 | C   | VAL | 1511 | 0.150   | 2.626   | 23.365 | 1.00 | 30.51 |
| ATOM | 300 | O   | VAL | 1511 | 0.274   | 3.346   | 24.360 | 1.00 | 31.09 |
| ATOM | 301 | N   | ALA | 1512 | 0.679   | 2.935   | 22.185 | 1.00 | 28.30 |
| ATOM | 302 | CA  | ALA | 1512 | 1.408   | 4.173   | 21.979 | 1.00 | 25.23 |
| ATOM | 303 | CB  | ALA | 1512 | 2.740   | 3.889   | 21.331 | 1.00 | 23.82 |
| ATOM | 304 | C   | ALA | 1512 | 0.535   | 5.012   | 21.057 | 1.00 | 25.50 |
| ATOM | 305 | O   | ALA | 1512 | 0.033   | 4.515   | 20.061 | 1.00 | 27.06 |
| ATOM | 306 | N   | VAL | 1513 | 0.351   | 6.281   | 21.404 | 1.00 | 29.37 |



|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 307 | CA  | VAL | 1513 | -0.477 | 7.199  | 20.625 | 1.00 | 31.53 |
| ATOM | 308 | CB  | VAL | 1513 | -1.588 | 7.843  | 21.504 | 1.00 | 32.26 |
| ATOM | 309 | CG1 | VAL | 1513 | -2.453 | 8.775  | 20.684 | 1.00 | 34.37 |
| ATOM | 310 | CG2 | VAL | 1513 | -2.452 | 6.776  | 22.152 | 1.00 | 33.42 |
| ATOM | 311 | C   | VAL | 1513 | 0.347  | 8.328  | 20.006 | 1.00 | 33.34 |
| ATOM | 312 | O   | VAL | 1513 | 1.030  | 9.064  | 20.719 | 1.00 | 32.35 |
| ATOM | 313 | N   | LYS | 1514 | 0.321  | 8.423  | 18.680 | 1.00 | 36.65 |
| ATOM | 314 | CA  | LYS | 1514 | 1.022  | 9.466  | 17.929 | 1.00 | 37.26 |
| ATOM | 315 | CB  | LYS | 1514 | 1.541  | 8.917  | 16.606 | 1.00 | 36.21 |
| ATOM | 316 | CG  | LYS | 1514 | 2.524  | 7.792  | 16.800 | 1.00 | 39.32 |
| ATOM | 317 | CD  | LYS | 1514 | 2.725  | 6.998  | 15.535 | 1.00 | 42.59 |
| ATOM | 318 | CE  | LYS | 1514 | 3.245  | 7.860  | 14.416 | 1.00 | 44.71 |
| ATOM | 319 | NZ  | LYS | 1514 | 4.408  | 8.680  | 14.844 | 1.00 | 38.78 |
| ATOM | 320 | C   | LYS | 1514 | 0.020  | 10.574 | 17.653 | 1.00 | 37.21 |
| ATOM | 321 | O   | LYS | 1514 | -1.095 | 10.305 | 17.192 | 1.00 | 37.39 |
| ATOM | 322 | N   | MET | 1515 | 0.433  | 11.812 | 17.908 | 1.00 | 39.05 |
| ATOM | 323 | CA  | MET | 1515 | -0.419 | 12.981 | 17.713 | 1.00 | 41.68 |
| ATOM | 324 | CB  | MET | 1515 | -1.162 | 13.299 | 18.991 | 1.00 | 41.07 |
| ATOM | 325 | CG  | MET | 1515 | -0.251 | 13.641 | 20.139 | 1.00 | 40.69 |
| ATOM | 326 | SD  | MET | 1515 | -1.271 | 13.763 | 21.571 | 1.00 | 41.18 |
| ATOM | 327 | CE  | MET | 1515 | -1.523 | 12.018 | 21.959 | 1.00 | 40.98 |
| ATOM | 328 | C   | MET | 1515 | 0.397  | 14.197 | 17.321 | 1.00 | 44.66 |
| ATOM | 329 | O   | MET | 1515 | 1.606  | 14.255 | 17.550 | 1.00 | 43.83 |
| ATOM | 330 | N   | LEU | 1516 | -0.288 | 15.182 | 16.747 | 1.00 | 50.63 |
| ATOM | 331 | CA  | LEU | 1516 | 0.349  | 16.423 | 16.312 | 1.00 | 52.21 |
| ATOM | 332 | CB  | LEU | 1516 | -0.513 | 17.129 | 15.255 | 1.00 | 50.18 |
| ATOM | 333 | CG  | LEU | 1516 | -0.757 | 16.463 | 13.904 | 1.00 | 50.25 |
| ATOM | 334 | CD1 | LEU | 1516 | -1.733 | 17.298 | 13.114 | 1.00 | 51.02 |
| ATOM | 335 | CD2 | LEU | 1516 | 0.555  | 16.329 | 13.163 | 1.00 | 51.60 |
| ATOM | 336 | C   | LEU | 1516 | 0.549  | 17.391 | 17.473 | 1.00 | 54.25 |
| ATOM | 337 | O   | LEU | 1516 | -0.143 | 17.326 | 19.488 | 1.00 | 52.52 |
| ATOM | 338 | N   | LYS | 1517 | 1.500  | 18.299 | 17.302 | 1.00 | 59.09 |
| ATOM | 339 | CA  | LYS | 1517 | 1.773  | 19.315 | 18.313 | 1.00 | 62.57 |
| ATOM | 340 | CB  | LYS | 1517 | 3.220  | 19.813 | 18.222 | 1.00 | 66.29 |
| ATOM | 341 | CG  | LYS | 1517 | 4.281  | 18.810 | 18.663 | 1.00 | 70.96 |
| ATOM | 342 | CD  | LYS | 1517 | 5.666  | 19.197 | 18.130 | 1.00 | 74.61 |
| ATOM | 343 | CE  | LYS | 1517 | 6.711  | 18.118 | 18.414 | 1.00 | 78.21 |
| ATOM | 344 | NZ  | LYS | 1517 | 8.020  | 18.410 | 17.751 | 1.00 | 77.95 |
| ATOM | 345 | C   | LYS | 1517 | 0.824  | 20.474 | 18.037 | 1.00 | 63.07 |
| ATOM | 346 | O   | LYS | 1517 | 0.226  | 20.557 | 16.960 | 1.00 | 63.68 |
| ATOM | 347 | N   | SER | 1518 | 0.720  | 21.391 | 18.987 | 1.00 | 64.54 |
| ATOM | 348 | CA  | SER | 1518 | -0.167 | 22.543 | 18.848 | 1.00 | 67.29 |
| ATOM | 349 | CB  | SER | 1518 | -0.085 | 23.439 | 20.090 | 1.00 | 65.14 |
| ATOM | 350 | C   | SER | 1518 | 0.124  | 23.382 | 17.609 | 1.00 | 69.48 |
| ATOM | 351 | O   | SER | 1518 | -0.798 | 23.843 | 16.938 | 1.00 | 71.85 |
| ATOM | 352 | N   | ASP | 1519 | 1.402  | 23.530 | 17.280 | 1.00 | 70.88 |
| ATOM | 353 | CA  | ASP | 1519 | 1.802  | 24.326 | 16.127 | 1.00 | 72.00 |
| ATOM | 354 | CB  | ASP | 1519 | 3.162  | 24.973 | 16.385 | 1.00 | 72.61 |
| ATOM | 355 | C   | ASP | 1519 | 1.861  | 23.548 | 14.817 | 1.00 | 72.32 |
| ATOM | 356 | O   | ASP | 1519 | 2.432  | 24.035 | 13.844 | 1.00 | 73.72 |
| ATOM | 357 | N   | ALA | 1520 | 1.322  | 22.332 | 14.798 | 1.00 | 72.11 |
| ATOM | 358 | CA  | ALA | 1520 | 1.344  | 21.508 | 13.595 | 1.00 | 71.13 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 359 | CB  | ALA | 1520 | 0.659  | 20.173 | 13.855 | 1.00 | 71.01 |
| ATOM | 360 | C   | ALA | 1520 | 0.666  | 22.242 | 12.440 | 1.00 | 69.96 |
| ATOM | 361 | O   | ALA | 1520 | -0.314 | 22.962 | 12.639 | 1.00 | 71.41 |
| ATOM | 362 | N   | THR | 1521 | 1.230  | 22.101 | 11.249 | 1.00 | 67.39 |
| ATOM | 363 | CA  | THR | 1521 | 0.676  | 22.726 | 10.064 | 1.00 | 66.23 |
| ATOM | 364 | CB  | THR | 1521 | 1.798  | 23.167 | 9.132  | 1.00 | 66.40 |
| ATOM | 365 | OG1 | THR | 1521 | 2.521  | 22.016 | 9.680  | 1.00 | 70.07 |
| ATOM | 366 | CG2 | THR | 1521 | 2.741  | 24.070 | 9.867  | 1.00 | 66.67 |
| ATOM | 367 | C   | THR | 1521 | -0.150 | 21.665 | 9.364  | 1.00 | 65.62 |
| ATOM | 368 | O   | THR | 1521 | -0.093 | 20.493 | 9.740  | 1.00 | 66.78 |
| ATOM | 369 | N   | GLU | 1522 | -0.893 | 22.057 | 8.330  | 1.00 | 63.60 |
| ATOM | 370 | CA  | GLU | 1522 | -1.698 | 21.095 | 7.584  | 1.00 | 62.25 |
| ATOM | 371 | CB  | GLU | 1522 | -2.560 | 21.802 | 6.531  | 1.00 | 64.02 |
| ATOM | 372 | C   | GLU | 1522 | -0.768 | 20.051 | 6.942  | 1.00 | 60.41 |
| ATOM | 373 | O   | GLU | 1522 | -1.161 | 18.906 | 6.738  | 1.00 | 61.94 |
| ATOM | 374 | N   | LYS | 1523 | 0.475  | 20.441 | 6.662  | 1.00 | 56.47 |
| ATOM | 375 | CA  | LYS | 1523 | 1.449  | 19.529 | 6.080  | 1.00 | 54.53 |
| ATOM | 376 | CB  | LYS | 1523 | 2.739  | 20.273 | 5.713  | 1.00 | 57.44 |
| ATOM | 377 | CG  | LYS | 1523 | 3.897  | 19.381 | 5.219  | 1.00 | 61.49 |
| ATOM | 378 | CD  | LYS | 1523 | 3.482  | 18.451 | 4.071  | 1.00 | 64.66 |
| ATOM | 379 | CE  | LYS | 1523 | 4.681  | 17.723 | 3.469  | 1.00 | 68.18 |
| ATOM | 380 | NZ  | LYS | 1523 | 4.252  | 16.704 | 2.458  | 1.00 | 73.23 |
| ATOM | 381 | C   | LYS | 1523 | 1.728  | 18.474 | 7.135  | 1.00 | 52.30 |
| ATOM | 382 | O   | LYS | 1523 | 1.757  | 17.280 | 6.832  | 1.00 | 54.59 |
| ATOM | 383 | N   | ASP | 1524 | 1.899  | 18.921 | 8.376  | 1.00 | 47.78 |
| ATOM | 384 | CA  | ASP | 1524 | 2.147  | 18.023 | 9.493  | 1.00 | 45.55 |
| ATOM | 385 | CB  | ASP | 1524 | 2.380  | 18.815 | 10.783 | 1.00 | 47.64 |
| ATOM | 386 | CG  | ASP | 1524 | 3.744  | 19.511 | 10.817 | 1.00 | 49.50 |
| ATOM | 387 | OD1 | ASP | 1524 | 3.849  | 20.580 | 11.460 | 1.00 | 47.22 |
| ATOM | 388 | OD2 | ASP | 1524 | 4.715  | 18.984 | 10.230 | 1.00 | 52.84 |
| ATOM | 389 | C   | ASP | 1524 | 0.968  | 17.054 | 9.661  | 1.00 | 43.55 |
| ATOM | 390 | O   | ASP | 1524 | 1.157  | 15.890 | 10.007 | 1.00 | 43.98 |
| ATOM | 391 | N   | LEU | 1525 | -0.240 | 17.541 | 9.391  | 1.00 | 40.77 |
| ATOM | 392 | CA  | LEU | 1525 | -1.438 | 16.713 | 9.483  | 1.00 | 40.28 |
| ATOM | 393 | CB  | LEU | 1525 | -2.701 | 17.592 | 9.411  | 1.00 | 40.54 |
| ATOM | 394 | CG  | LEU | 1525 | -4.100 | 16.957 | 9.403  | 1.00 | 40.33 |
| ATOM | 395 | CD1 | LEU | 1525 | -4.289 | 15.933 | 10.514 | 1.00 | 42.75 |
| ATOM | 396 | CD2 | LEU | 1525 | -5.120 | 18.044 | 9.524  | 1.00 | 36.98 |
| ATOM | 397 | C   | LEU | 1525 | -1.417 | 15.699 | 8.343  | 1.00 | 40.19 |
| ATOM | 398 | O   | LEU | 1525 | -1.682 | 14.525 | 8.557  | 1.00 | 41.90 |
| ATOM | 399 | N   | SER | 1526 | -1.064 | 16.158 | 7.147  | 1.00 | 42.13 |
| ATOM | 400 | CA  | SER | 1526 | -1.002 | 15.315 | 5.954  | 1.00 | 44.75 |
| ATOM | 401 | CB  | SER | 1526 | -0.582 | 16.136 | 4.723  | 1.00 | 49.61 |
| ATOM | 402 | OG  | SER | 1526 | -1.538 | 17.100 | 4.352  | 1.00 | 59.95 |
| ATOM | 403 | C   | SER | 1526 | -0.007 | 14.193 | 6.144  | 1.00 | 42.71 |
| ATOM | 404 | O   | SER | 1526 | -0.297 | 13.047 | 5.840  | 1.00 | 45.33 |
| ATOM | 405 | N   | ASP | 1527 | 1.167  | 14.527 | 6.655  | 1.00 | 40.97 |
| ATOM | 406 | CA  | ASP | 1527 | 2.210  | 13.546 | 6.867  | 1.00 | 41.03 |
| ATOM | 407 | CB  | ASP | 1527 | 3.497  | 14.235 | 7.316  | 1.00 | 45.30 |
| ATOM | 408 | CG  | ASP | 1527 | 4.083  | 15.147 | 6.235  | 1.00 | 47.84 |
| ATOM | 409 | OD1 | ASP | 1527 | 3.700  | 15.041 | 5.047  | 1.00 | 48.84 |
| ATOM | 410 | OD2 | ASP | 1527 | 4.957  | 15.966 | 6.600  | 1.00 | 49.11 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 411 | C   | ASP | 1527 | 1.782  | 12.485 | 7.858  | 1.00 | 39.01 |
| ATOM | 412 | O   | ASP | 1527 | 2.021  | 11.298 | 7.651  | 1.00 | 40.04 |
| ATOM | 413 | N   | LEU | 1528 | 1.094  | 12.917 | 8.909  | 1.00 | 35.93 |
| ATOM | 414 | CA  | LEU | 1528 | 0.594  | 12.004 | 9.927  | 1.00 | 36.48 |
| ATOM | 415 | CB  | LEU | 1528 | -0.008 | 12.784 | 11.107 | 1.00 | 36.51 |
| ATOM | 416 | CG  | LEU | 1528 | -0.436 | 11.961 | 12.326 | 1.00 | 40.56 |
| ATOM | 417 | CD1 | LEU | 1528 | 0.650  | 10.955 | 12.692 | 1.00 | 42.00 |
| ATOM | 418 | CD2 | LEU | 1528 | -0.770 | 12.877 | 13.499 | 1.00 | 38.25 |
| ATOM | 419 | C   | LEU | 1528 | -0.453 | 11.065 | 9.309  | 1.00 | 35.25 |
| ATOM | 420 | O   | LEU | 1528 | -0.442 | 9.855  | 9.566  | 1.00 | 36.37 |
| ATOM | 421 | N   | ILE | 1529 | -1.311 | 11.614 | 8.453  | 1.00 | 33.10 |
| ATOM | 422 | CA  | ILE | 1529 | -2.365 | 10.839 | 7.805  | 1.00 | 32.32 |
| ATOM | 423 | CB  | ILE | 1529 | -3.364 | 11.732 | 7.012  | 1.00 | 31.17 |
| ATOM | 424 | CG2 | ILE | 1529 | -4.311 | 10.861 | 6.187  | 1.00 | 32.01 |
| ATOM | 425 | CG1 | ILE | 1529 | -4.193 | 12.579 | 7.983  | 1.00 | 31.35 |
| ATOM | 426 | CD1 | ILE | 1529 | -5.024 | 13.662 | 7.335  | 1.00 | 32.59 |
| ATOM | 427 | C   | ILE | 1529 | -1.732 | 9.825  | 6.877  | 1.00 | 33.44 |
| ATOM | 428 | O   | ILE | 1529 | -2.148 | 8.667  | 6.860  | 1.00 | 35.41 |
| ATOM | 429 | N   | SER | 1530 | -0.733 | 10.269 | 6.108  | 1.00 | 33.40 |
| ATOM | 430 | CA  | SER | 1530 | 0.007  | 9.414  | 5.171  | 1.00 | 34.34 |
| ATOM | 431 | CB  | SER | 1530 | 1.126  | 10.197 | 4.495  | 1.00 | 38.37 |
| ATOM | 432 | OG  | SER | 1530 | 0.605  | 11.332 | 3.835  | 1.00 | 46.02 |
| ATOM | 433 | C   | SER | 1530 | 0.614  | 8.208  | 5.968  | 1.00 | 30.41 |
| ATOM | 434 | O   | SER | 1530 | 0.494  | 7.083  | 5.376  | 1.00 | 30.50 |
| ATOM | 435 | N   | GLU | 1531 | 1.256  | 8.449  | 7.010  | 1.00 | 27.40 |
| ATOM | 436 | CA  | GLU | 1531 | 1.865  | 7.369  | 7.766  | 1.00 | 28.90 |
| ATOM | 437 | CB  | GLU | 1531 | 2.629  | 7.907  | 8.973  | 1.00 | 28.45 |
| ATOM | 438 | CG  | GLU | 1531 | 3.263  | 6.812  | 9.825  | 1.00 | 29.33 |
| ATOM | 439 | CD  | GLU | 1531 | 4.094  | 7.344  | 10.979 | 1.00 | 31.14 |
| ATOM | 440 | OE1 | GLU | 1531 | 4.913  | 6.561  | 11.495 | 1.00 | 33.14 |
| ATOM | 441 | OE2 | GLU | 1531 | 3.940  | 8.522  | 11.378 | 1.00 | 31.11 |
| ATOM | 442 | C   | GLU | 1531 | 0.824  | 6.351  | 8.215  | 1.00 | 30.88 |
| ATOM | 443 | O   | GLU | 1531 | 1.118  | 5.146  | 8.259  | 1.00 | 32.35 |
| ATOM | 444 | N   | MET | 1532 | -0.377 | 6.832  | 8.553  | 1.00 | 29.86 |
| ATOM | 445 | CA  | MET | 1532 | -1.476 | 5.966  | 8.996  | 1.00 | 30.01 |
| ATOM | 446 | CB  | MET | 1532 | -2.608 | 6.800  | 9.596  | 1.00 | 29.58 |
| ATOM | 447 | CG  | MET | 1532 | -3.761 | 5.968  | 10.146 | 1.00 | 31.20 |
| ATOM | 448 | SD  | MET | 1532 | -5.095 | 6.973  | 10.779 | 1.00 | 29.37 |
| ATOM | 449 | CE  | MET | 1532 | -5.271 | 8.228  | 9.489  | 1.00 | 21.59 |
| ATOM | 450 | C   | MET | 1532 | -2.002 | 5.145  | 7.814  | 1.00 | 29.60 |
| ATOM | 451 | O   | MET | 1532 | -2.131 | 3.923  | 7.893  | 1.00 | 29.68 |
| ATOM | 452 | N   | GLU | 1533 | -2.257 | 5.824  | 6.702  | 1.00 | 30.38 |
| ATOM | 453 | CA  | GLU | 1533 | -2.755 | 5.176  | 5.495  | 1.00 | 30.12 |
| ATOM | 454 | CB  | GLU | 1533 | -2.987 | 6.221  | 4.423  | 1.00 | 25.79 |
| ATOM | 455 | CG  | GLU | 1533 | -4.117 | 7.154  | 4.784  | 1.00 | 26.67 |
| ATOM | 456 | CD  | GLU | 1533 | -5.420 | 6.405  | 5.064  | 1.00 | 29.90 |
| ATOM | 457 | OE1 | GLU | 1533 | -5.923 | 5.696  | 4.166  | 1.00 | 29.93 |
| ATOM | 458 | OE2 | GLU | 1533 | -5.939 | 6.518  | 6.197  | 1.00 | 29.10 |
| ATOM | 459 | C   | GLU | 1533 | -1.787 | 4.120  | 5.003  | 1.00 | 30.32 |
| ATOM | 460 | O   | GLU | 1533 | -2.197 | 3.043  | 4.563  | 1.00 | 32.06 |
| ATOM | 461 | N   | MET | 1534 | -0.500 | 4.435  | 5.136  | 1.00 | 29.97 |
| ATOM | 462 | CA  | MET | 1534 | 0.606  | 3.571  | 4.737  | 1.00 | 31.22 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 463 | CB  | MET | 1534 | 1.918  | 4.305  | 4.985  | 1.00 | 33.86 |
| ATOM | 464 | CG  | MET | 1534 | 3.118  | 3.487  | 4.675  | 1.00 | 40.40 |
| ATOM | 465 | SD  | MET | 1534 | 3.528  | 3.627  | 2.982  | 1.00 | 48.27 |
| ATOM | 466 | CE  | MET | 1534 | 5.215  | 4.257  | 3.155  | 1.00 | 42.49 |
| ATOM | 467 | C   | MET | 1534 | 0.565  | 2.304  | 5.581  | 1.00 | 30.90 |
| ATOM | 468 | O   | MET | 1534 | 0.596  | 1.193  | 5.050  | 1.00 | 33.24 |
| ATOM | 469 | N   | MET | 1535 | 0.493  | 2.485  | 6.896  | 1.00 | 29.07 |
| ATOM | 470 | CA  | MET | 1535 | 0.417  | 1.354  | 7.813  | 1.00 | 28.82 |
| ATOM | 471 | CB  | MET | 1535 | 0.325  | 1.829  | 9.274  | 1.00 | 28.87 |
| ATOM | 472 | CG  | MET | 1535 | 1.622  | 2.434  | 9.803  | 1.00 | 28.16 |
| ATOM | 473 | SD  | MET | 1535 | 1.674  | 2.633  | 11.595 | 1.00 | 30.96 |
| ATOM | 474 | CE  | MET | 1535 | 1.393  | 4.335  | 11.729 | 1.00 | 27.69 |
| ATOM | 475 | C   | MET | 1535 | -0.777 | 0.460  | 7.445  | 1.00 | 28.59 |
| ATOM | 476 | O   | MET | 1535 | -0.682 | -0.774 | 7.530  | 1.00 | 30.37 |
| ATOM | 477 | N   | LYS | 1536 | -1.885 | 1.072  | 7.019  | 1.00 | 26.53 |
| ATOM | 478 | CA  | LYS | 1536 | -3.078 | 0.315  | 6.608  | 1.00 | 27.60 |
| ATOM | 479 | CB  | LYS | 1536 | -4.237 | 1.253  | 6.283  | 1.00 | 25.88 |
| ATOM | 480 | CG  | LYS | 1536 | -4.807 | 1.947  | 7.479  | 1.00 | 23.80 |
| ATOM | 481 | CD  | LYS | 1536 | -5.925 | 2.857  | 7.061  | 1.00 | 21.64 |
| ATOM | 482 | CE  | LYS | 1536 | -6.402 | 3.674  | 8.225  | 1.00 | 21.83 |
| ATOM | 483 | NZ  | LYS | 1536 | -7.469 | 4.594  | 7.796  | 1.00 | 26.27 |
| ATOM | 484 | C   | LYS | 1536 | -2.813 | -0.573 | 5.397  | 1.00 | 27.49 |
| ATOM | 485 | O   | LYS | 1536 | -3.150 | -1.756 | 5.393  | 1.00 | 29.24 |
| ATOM | 486 | N   | MET | 1537 | -2.186 | -0.014 | 4.372  | 1.00 | 27.89 |
| ATOM | 487 | CA  | MET | 1537 | -1.890 | -0.783 | 3.172  | 1.00 | 29.12 |
| ATOM | 488 | CB  | MET | 1537 | -1.321 | 0.136  | 2.085  | 1.00 | 32.72 |
| ATOM | 489 | CG  | MET | 1537 | -2.282 | 1.208  | 1.566  | 1.00 | 37.18 |
| ATOM | 490 | SD  | MET | 1537 | -3.740 | 0.505  | 0.744  | 1.00 | 43.17 |
| ATOM | 491 | CE  | MET | 1537 | -2.964 | -0.152 | -0.698 | 1.00 | 43.04 |
| ATOM | 492 | C   | MET | 1537 | -0.903 | -1.920 | 3.447  | 1.00 | 29.58 |
| ATOM | 493 | O   | MET | 1537 | -1.102 | -3.049 | 2.996  | 1.00 | 27.53 |
| ATOM | 494 | N   | ILE | 1538 | 0.142  | -1.626 | 4.223  | 1.00 | 28.64 |
| ATOM | 495 | CA  | ILE | 1538 | 1.189  | -2.609 | 4.533  | 1.00 | 26.88 |
| ATOM | 496 | CB  | ILE | 1538 | 2.381  | -1.948 | 5.280  | 1.00 | 25.23 |
| ATOM | 497 | CG2 | ILE | 1538 | 3.380  | -2.989 | 5.745  | 1.00 | 27.31 |
| ATOM | 498 | CG1 | ILE | 1538 | 3.097  | -0.968 | 4.345  | 1.00 | 22.70 |
| ATOM | 499 | CD1 | ILE | 1538 | 4.445  | -0.465 | 4.874  | 1.00 | 23.44 |
| ATOM | 500 | C   | ILE | 1538 | 0.756  | -3.911 | 5.224  | 1.00 | 26.75 |
| ATOM | 501 | O   | ILE | 1538 | 1.274  | -4.980 | 4.909  | 1.00 | 28.60 |
| ATOM | 502 | N   | GLY | 1539 | -0.200 | -3.849 | 6.137  | 1.00 | 27.19 |
| ATOM | 503 | CA  | GLY | 1539 | -0.625 | -5.069 | 6.812  | 1.00 | 26.88 |
| ATOM | 504 | C   | GLY | 1539 | 0.207  | -5.369 | 8.039  | 1.00 | 26.04 |
| ATOM | 505 | O   | GLY | 1539 | 1.220  | -4.708 | 8.281  | 1.00 | 27.96 |
| ATOM | 506 | N   | LYS | 1540 | -0.195 | -6.396 | 8.788  | 1.00 | 23.25 |
| ATOM | 507 | CA  | LYS | 1540 | 0.461  | -6.781 | 10.052 | 1.00 | 21.53 |
| ATOM | 508 | CB  | LYS | 1540 | -0.573 | -7.350 | 11.028 | 1.00 | 20.48 |
| ATOM | 509 | CG  | LYS | 1540 | -1.530 | -6.346 | 11.563 | 1.00 | 28.42 |
| ATOM | 510 | CD  | LYS | 1540 | -2.542 | -6.977 | 12.502 | 1.00 | 36.24 |
| ATOM | 511 | CE  | LYS | 1540 | -3.568 | -5.942 | 12.994 | 1.00 | 41.05 |
| ATOM | 512 | NZ  | LYS | 1540 | -2.973 | -4.847 | 13.836 | 1.00 | 41.25 |
| ATOM | 513 | C   | LYS | 1540 | 1.577  | -7.796 | 9.974  | 1.00 | 19.96 |
| ATOM | 514 | O   | LYS | 1540 | 1.536  | -8.723 | 9.176  | 1.00 | 21.51 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 515 | N   | HIS | 1541 | 2.514  | -7.670  | 10.905 | 1.00 | 19.82 |
| ATOM | 516 | CA  | HIS | 1541 | 3.622  | -8.613  | 11.040 | 1.00 | 21.35 |
| ATOM | 517 | CB  | HIS | 1541 | 4.704  | -8.411  | 9.972  | 1.00 | 21.39 |
| ATOM | 518 | CG  | HIS | 1541 | 5.747  | -9.490  | 9.963  | 1.00 | 17.07 |
| ATOM | 519 | CD2 | HIS | 1541 | 5.810  | -10.667 | 9.292  | 1.00 | 18.04 |
| ATOM | 520 | ND1 | HIS | 1541 | 6.891  | -9.428  | 10.727 | 1.00 | 19.05 |
| ATOM | 521 | CE1 | HIS | 1541 | 7.609  | -10.522 | 10.535 | 1.00 | 19.63 |
| ATOM | 522 | NE2 | HIS | 1541 | 6.975  | -11.293 | 9.668  | 1.00 | 18.32 |
| ATOM | 523 | C   | HIS | 1541 | 4.198  | -8.456  | 12.449 | 1.00 | 23.61 |
| ATOM | 524 | O   | HIS | 1541 | 4.231  | -7.352  | 13.002 | 1.00 | 25.66 |
| ATOM | 525 | N   | LYS | 1542 | 4.587  | -9.577  | 13.045 | 1.00 | 24.32 |
| ATOM | 526 | CA  | LYS | 1542 | 5.141  | -9.610  | 14.396 | 1.00 | 27.04 |
| ATOM | 527 | CB  | LYS | 1542 | 5.578  | -11.044 | 14.742 | 1.00 | 30.70 |
| ATOM | 528 | CG  | LYS | 1542 | 6.130  | -11.239 | 16.150 | 1.00 | 40.75 |
| ATOM | 529 | CD  | LYS | 1542 | 6.380  | -12.719 | 16.420 | 1.00 | 48.24 |
| ATOM | 530 | CE  | LYS | 1542 | 6.995  | -13.414 | 15.183 | 1.00 | 56.89 |
| ATOM | 531 | NZ  | LYS | 1542 | 7.457  | -14.831 | 15.421 | 1.00 | 60.99 |
| ATOM | 532 | C   | LYS | 1542 | 6.318  | -8.674  | 14.608 | 1.00 | 24.59 |
| ATOM | 533 | O   | LYS | 1542 | 6.462  | -8.067  | 15.676 | 1.00 | 23.35 |
| ATOM | 534 | N   | ASN | 1543 | 7.147  | -8.546  | 13.576 | 1.00 | 22.05 |
| ATOM | 535 | CA  | ASN | 1543 | 8.333  | -7.702  | 13.689 | 1.00 | 21.40 |
| ATOM | 536 | CB  | ASN | 1543 | 9.558  | -8.482  | 13.217 | 1.00 | 20.89 |
| ATOM | 537 | CG  | ASN | 1543 | 9.721  | -9.811  | 13.945 | 1.00 | 20.37 |
| ATOM | 538 | OD1 | ASN | 1543 | 9.501  | -10.883 | 13.372 | 1.00 | 24.97 |
| ATOM | 539 | ND2 | ASN | 1543 | 10.016 | -9.741  | 15.230 | 1.00 | 21.56 |
| ATOM | 540 | C   | ASN | 1543 | 8.312  | -6.268  | 13.155 | 1.00 | 20.38 |
| ATOM | 541 | O   | ASN | 1543 | 9.353  | -5.733  | 12.776 | 1.00 | 20.03 |
| ATOM | 542 | N   | ILE | 1544 | 7.153  | -5.624  | 13.180 | 1.00 | 20.02 |
| ATOM | 543 | CA  | ILE | 1544 | 7.037  | -4.226  | 12.771 | 1.00 | 21.14 |
| ATOM | 544 | CB  | ILE | 1544 | 6.545  | -4.029  | 11.292 | 1.00 | 22.97 |
| ATOM | 545 | CG2 | ILE | 1544 | 7.436  | -4.810  | 10.334 | 1.00 | 23.27 |
| ATOM | 546 | CG1 | ILE | 1544 | 5.082  | -4.447  | 11.096 | 1.00 | 22.85 |
| ATOM | 547 | CD1 | ILE | 1544 | 4.485  | -3.974  | 9.760  | 1.00 | 18.94 |
| ATOM | 548 | C   | ILE | 1544 | 6.044  | -3.590  | 13.757 | 1.00 | 20.02 |
| ATOM | 549 | O   | ILE | 1544 | 5.342  | -4.309  | 14.466 | 1.00 | 21.00 |
| ATOM | 550 | N   | ILE | 1545 | 6.103  | -2.275  | 13.943 | 1.00 | 20.09 |
| ATOM | 551 | CA  | ILE | 1545 | 5.140  | -1.608  | 14.826 | 1.00 | 22.82 |
| ATOM | 552 | CB  | ILE | 1545 | 5.586  | -0.161  | 15.198 | 1.00 | 23.07 |
| ATOM | 553 | CG2 | ILE | 1545 | 4.399  | 0.652   | 15.718 | 1.00 | 21.94 |
| ATOM | 554 | CG1 | ILE | 1545 | 6.759  | -0.178  | 16.193 | 1.00 | 20.49 |
| ATOM | 555 | CD1 | ILE | 1545 | 6.450  | -0.730  | 17.579 | 1.00 | 15.00 |
| ATOM | 556 | C   | ILE | 1545 | 3.853  | -1.555  | 14.010 | 1.00 | 24.18 |
| ATOM | 557 | O   | ILE | 1545 | 3.809  | -0.954  | 12.920 | 1.00 | 25.68 |
| ATOM | 558 | N   | ASN | 1546 | 2.829  | -2.236  | 14.514 | 1.00 | 25.69 |
| ATOM | 559 | CA  | ASN | 1546 | 1.528  | -2.311  | 13.853 | 1.00 | 24.23 |
| ATOM | 560 | CB  | ASN | 1546 | 0.866  | -3.697  | 14.060 | 1.00 | 25.21 |
| ATOM | 561 | CG  | ASN | 1546 | 1.690  | -4.834  | 13.481 | 1.00 | 21.10 |
| ATOM | 562 | OD1 | ASN | 1546 | 1.764  | -4.997  | 12.274 | 1.00 | 23.44 |
| ATOM | 563 | ND2 | ASN | 1546 | 2.324  | -5.606  | 14.343 | 1.00 | 18.20 |
| ATOM | 564 | C   | ASN | 1546 | 0.567  | -1.235  | 14.325 | 1.00 | 23.12 |
| ATOM | 565 | O   | ASN | 1546 | 0.709  | -0.682  | 15.426 | 1.00 | 24.14 |
| ATOM | 566 | N   | LEU | 1547 | -0.382 | -0.920  | 13.456 | 1.00 | 23.49 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 567 | CA  | LEU | 1547 | -1.417  | 0.069  | 13.718 | 1.00 | 24.50 |
| ATOM | 568 | CB  | LEU | 1547 | -1.976  | 0.597  | 12.378 | 1.00 | 21.63 |
| ATOM | 569 | CG  | LEU | 1547 | -3.189  | 1.535  | 12.353 | 1.00 | 22.37 |
| ATOM | 570 | CD1 | LEU | 1547 | -2.834  | 2.903  | 12.922 | 1.00 | 21.78 |
| ATOM | 571 | CD2 | LEU | 1547 | -3.714  | 1.660  | 10.930 | 1.00 | 21.31 |
| ATOM | 572 | C   | LEU | 1547 | -2.510  | -0.681 | 14.495 | 1.00 | 26.70 |
| ATOM | 573 | O   | LEU | 1547 | -2.849  | -1.823 | 14.160 | 1.00 | 28.96 |
| ATOM | 574 | N   | LEU | 1548 | -3.017  | -0.082 | 15.565 | 1.00 | 25.96 |
| ATOM | 575 | CA  | LEU | 1548 | -4.047  | -0.714 | 16.365 | 1.00 | 22.37 |
| ATOM | 576 | CB  | LEU | 1548 | -3.686  | -0.682 | 17.868 | 1.00 | 17.76 |
| ATOM | 577 | CG  | LEU | 1548 | -2.346  | -1.360 | 18.224 | 1.00 | 17.12 |
| ATOM | 578 | CD1 | LEU | 1548 | -2.150  | -1.468 | 19.708 | 1.00 | 18.81 |
| ATOM | 579 | CD2 | LEU | 1548 | -2.266  | -2.737 | 17.631 | 1.00 | 16.20 |
| ATOM | 580 | C   | LEU | 1548 | -5.395  | -0.061 | 16.099 | 1.00 | 23.30 |
| ATOM | 581 | O   | LEU | 1548 | -6.418  | -0.727 | 16.175 | 1.00 | 24.18 |
| ATOM | 582 | N   | GLY | 1549 | -5.395  | 1.228  | 15.758 | 1.00 | 21.53 |
| ATOM | 583 | CA  | GLY | 1549 | -6.636  | 1.933  | 15.485 | 1.00 | 22.47 |
| ATOM | 584 | C   | GLY | 1549 | -6.392  | 3.421  | 15.340 | 1.00 | 24.62 |
| ATOM | 585 | O   | GLY | 1549 | -5.245  | 3.835  | 15.163 | 1.00 | 25.06 |
| ATOM | 586 | N   | ALA | 1550 | -7.459  | 4.219  | 15.409 | 1.00 | 24.15 |
| ATOM | 587 | CA  | ALA | 1550 | -7.362  | 5.672  | 15.313 | 1.00 | 22.20 |
| ATOM | 588 | CB  | ALA | 1550 | -7.063  | 6.079  | 13.890 | 1.00 | 19.97 |
| ATOM | 589 | C   | ALA | 1550 | -8.602  | 6.415  | 15.802 | 1.00 | 23.75 |
| ATOM | 590 | O   | ALA | 1550 | -9.707  | 5.876  | 15.804 | 1.00 | 26.43 |
| ATOM | 591 | N   | CYS | 1551 | -8.383  | 7.660  | 16.213 | 1.00 | 25.34 |
| ATOM | 592 | CA  | CYS | 1551 | -9.425  | 8.590  | 16.678 | 1.00 | 27.17 |
| ATOM | 593 | CB  | CYS | 1551 | -9.160  | 9.045  | 18.127 | 1.00 | 26.84 |
| ATOM | 594 | SG  | CYS | 1551 | -9.246  | 7.802  | 19.448 | 1.00 | 30.32 |
| ATOM | 595 | C   | CYS | 1551 | -9.294  | 9.787  | 15.719 | 1.00 | 28.42 |
| ATOM | 596 | O   | CYS | 1551 | -8.364  | 10.575 | 15.827 | 1.00 | 27.28 |
| ATOM | 597 | N   | THR | 1552 | -10.145 | 9.823  | 14.702 | 1.00 | 30.47 |
| ATOM | 598 | CA  | THR | 1552 | -10.076 | 10.873 | 13.690 | 1.00 | 30.58 |
| ATOM | 599 | CB  | THR | 1552 | -10.061 | 10.219 | 12.280 | 1.00 | 30.58 |
| ATOM | 600 | OG1 | THR | 1552 | -11.266 | 9.465  | 12.096 | 1.00 | 31.11 |
| ATOM | 601 | CG2 | THR | 1552 | -8.895  | 9.255  | 12.151 | 1.00 | 27.59 |
| ATOM | 602 | C   | THR | 1552 | -11.241 | 11.847 | 13.695 | 1.00 | 32.24 |
| ATOM | 603 | O   | THR | 1552 | -11.192 | 12.911 | 13.070 | 1.00 | 28.56 |
| ATOM | 604 | N   | GLN | 1553 | -12.339 | 11.408 | 14.286 | 1.00 | 35.46 |
| ATOM | 605 | CA  | GLN | 1553 | -13.529 | 12.233 | 14.295 | 1.00 | 38.72 |
| ATOM | 606 | CB  | GLN | 1553 | -14.775 | 11.359 | 14.148 | 1.00 | 38.66 |
| ATOM | 607 | CG  | GLN | 1553 | -14.811 | 10.529 | 12.876 | 1.00 | 41.41 |
| ATOM | 608 | CD  | GLN | 1553 | -14.695 | 11.381 | 11.627 | 1.00 | 44.05 |
| ATOM | 609 | OE1 | GLN | 1553 | -15.442 | 12.345 | 11.445 | 1.00 | 45.08 |
| ATOM | 610 | NE2 | GLN | 1553 | -13.746 | 11.033 | 10.765 | 1.00 | 43.32 |
| ATOM | 611 | C   | GLN | 1553 | -13.658 | 13.168 | 15.483 | 1.00 | 41.20 |
| ATOM | 612 | O   | GLN | 1553 | -13.230 | 12.837 | 16.590 | 1.00 | 39.89 |
| ATOM | 613 | N   | ASP | 1554 | -14.225 | 14.344 | 15.219 | 1.00 | 44.03 |
| ATOM | 614 | CA  | ASP | 1554 | -14.474 | 15.356 | 16.237 | 1.00 | 46.94 |
| ATOM | 615 | CB  | ASP | 1554 | -15.778 | 15.028 | 16.976 | 1.00 | 49.94 |
| ATOM | 616 | CG  | ASP | 1554 | -17.007 | 15.262 | 16.122 | 1.00 | 56.68 |
| ATOM | 617 | OD1 | ASP | 1554 | -17.966 | 15.878 | 16.631 | 1.00 | 64.76 |
| ATOM | 618 | OD2 | ASP | 1554 | -17.030 | 14.829 | 14.947 | 1.00 | 60.79 |

|      |     |     |     |      |         |        |        |      |       |
|------|-----|-----|-----|------|---------|--------|--------|------|-------|
| ATOM | 619 | C   | ASP | 1554 | -13.343 | 15.563 | 17.244 | 1.00 | 47.24 |
| ATOM | 620 | O   | ASP | 1554 | -13.522 | 15.375 | 18.452 | 1.00 | 48.98 |
| ATOM | 621 | N   | GLY | 1555 | -12.182 | 15.966 | 16.747 | 1.00 | 44.00 |
| ATOM | 622 | CA  | GLY | 1555 | -11.062 | 16.185 | 17.638 | 1.00 | 41.07 |
| ATOM | 623 | C   | GLY | 1555 | -9.728  | 15.891 | 16.994 | 1.00 | 40.26 |
| ATOM | 624 | O   | GLY | 1555 | -9.663  | 15.567 | 15.810 | 1.00 | 39.72 |
| ATOM | 625 | N   | PRO | 1556 | -8.635  | 15.987 | 17.759 | 1.00 | 39.21 |
| ATOM | 626 | CD  | PRO | 1556 | -8.634  | 16.266 | 19.208 | 1.00 | 39.09 |
| ATOM | 627 | CA  | PRO | 1556 | -7.271  | 15.740 | 17.294 | 1.00 | 37.84 |
| ATOM | 628 | CB  | PRO | 1556 | -6.436  | 15.947 | 18.549 | 1.00 | 39.66 |
| ATOM | 629 | CG  | PRO | 1556 | -7.269  | 16.842 | 19.389 | 1.00 | 39.53 |
| ATOM | 630 | C   | PRO | 1556 | -7.094  | 14.314 | 16.806 | 1.00 | 37.75 |
| ATOM | 631 | O   | PRO | 1556 | -7.574  | 13.377 | 17.444 | 1.00 | 37.25 |
| ATOM | 632 | N   | LEU | 1557 | -6.379  | 14.153 | 15.699 | 1.00 | 36.09 |
| ATOM | 633 | CA  | LEU | 1557 | -6.112  | 12.844 | 15.124 | 1.00 | 34.69 |
| ATOM | 634 | CB  | LEU | 1557 | -5.458  | 13.010 | 13.741 | 1.00 | 32.25 |
| ATOM | 635 | CG  | LEU | 1557 | -4.962  | 11.774 | 12.972 | 1.00 | 31.23 |
| ATOM | 636 | CD1 | LEU | 1557 | -6.080  | 10.763 | 12.715 | 1.00 | 25.69 |
| ATOM | 637 | CD2 | LEU | 1557 | -4.339  | 12.219 | 11.669 | 1.00 | 28.21 |
| ATOM | 638 | C   | LEU | 1557 | -5.190  | 12.057 | 16.060 | 1.00 | 34.59 |
| ATOM | 639 | O   | LEU | 1557 | -4.173  | 12.578 | 16.524 | 1.00 | 32.09 |
| ATOM | 640 | N   | TYR | 1558 | -5.606  | 10.841 | 16.396 | 1.00 | 32.63 |
| ATOM | 641 | CA  | TYR | 1558 | -4.796  | 9.993  | 17.237 | 1.00 | 29.66 |
| ATOM | 642 | CB  | TYR | 1558 | -5.529  | 9.610  | 18.534 | 1.00 | 33.14 |
| ATOM | 643 | CG  | TYR | 1558 | -5.588  | 10.754 | 19.539 | 1.00 | 32.87 |
| ATOM | 644 | CD1 | TYR | 1558 | -6.583  | 10.792 | 20.517 | 1.00 | 34.58 |
| ATOM | 645 | CE1 | TYR | 1558 | -5.678  | 11.857 | 21.407 | 1.00 | 34.65 |
| ATOM | 646 | CD2 | TYR | 1558 | -4.678  | 11.805 | 19.483 | 1.00 | 35.69 |
| ATOM | 647 | CE2 | TYR | 1558 | -4.760  | 12.878 | 20.367 | 1.00 | 37.01 |
| ATOM | 648 | CZ  | TYR | 1558 | -5.766  | 12.899 | 21.324 | 1.00 | 37.52 |
| ATOM | 649 | OH  | TYR | 1558 | -5.868  | 13.986 | 22.164 | 1.00 | 40.19 |
| ATOM | 650 | C   | TYR | 1558 | -4.529  | 8.747  | 16.436 | 1.00 | 28.08 |
| ATOM | 651 | O   | TYR | 1558 | -5.467  | 8.137  | 15.924 | 1.00 | 30.12 |
| ATOM | 652 | N   | VAL | 1559 | -3.254  | 8.444  | 16.225 | 1.00 | 25.89 |
| ATOM | 653 | CA  | VAL | 1559 | -2.855  | 7.246  | 15.504 | 1.00 | 23.70 |
| ATOM | 654 | CB  | VAL | 1559 | -1.729  | 7.528  | 14.485 | 1.00 | 23.78 |
| ATOM | 655 | CG1 | VAL | 1559 | -1.456  | 6.282  | 13.623 | 1.00 | 20.75 |
| ATOM | 656 | CG2 | VAL | 1559 | -2.101  | 8.738  | 13.604 | 1.00 | 22.54 |
| ATOM | 657 | C   | VAL | 1559 | -2.358  | 6.311  | 16.596 | 1.00 | 23.47 |
| ATOM | 658 | O   | VAL | 1559 | -1.328  | 6.572  | 17.220 | 1.00 | 26.84 |
| ATOM | 659 | N   | ILE | 1560 | -3.146  | 5.283  | 16.889 | 1.00 | 23.58 |
| ATOM | 660 | CA  | ILE | 1560 | -2.818  | 4.316  | 17.928 | 1.00 | 23.75 |
| ATOM | 661 | CB  | ILE | 1560 | -4.112  | 3.732  | 18.552 | 1.00 | 22.67 |
| ATOM | 662 | CG2 | ILE | 1560 | -3.777  | 2.898  | 19.788 | 1.00 | 20.24 |
| ATOM | 663 | CG1 | ILE | 1560 | -5.063  | 4.884  | 18.904 | 1.00 | 20.09 |
| ATOM | 664 | CD1 | ILE | 1560 | -6.428  | 4.463  | 19.318 | 1.00 | 19.04 |
| ATOM | 665 | C   | ILE | 1560 | -1.954  | 3.181  | 17.356 | 1.00 | 27.39 |
| ATOM | 666 | O   | ILE | 1560 | -2.411  | 2.392  | 16.505 | 1.00 | 28.51 |
| ATOM | 667 | N   | VAL | 1561 | -0.720  | 3.089  | 17.840 | 1.00 | 26.76 |
| ATOM | 668 | CA  | VAL | 1561 | 0.238   | 2.088  | 17.368 | 1.00 | 25.91 |
| ATOM | 669 | CB  | VAL | 1561 | 1.445   | 2.801  | 16.653 | 1.00 | 24.50 |
| ATOM | 670 | CG1 | VAL | 1561 | 0.952   | 3.480  | 15.397 | 1.00 | 13.55 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 671 | CG2 | VAL | 1561 | 2.054  | 3.870  | 17.551 | 1.00 | 20.39 |
| ATOM | 672 | C   | VAL | 1561 | 0.693  | 1.151  | 18.519 | 1.00 | 24.80 |
| ATOM | 673 | O   | VAL | 1561 | 0.397  | 1.417  | 19.696 | 1.00 | 25.26 |
| ATOM | 674 | N   | GLU | 1562 | 1.349  | 0.032  | 18.192 | 1.00 | 22.30 |
| ATOM | 675 | CA  | GLU | 1562 | 1.793  | -0.901 | 19.230 | 1.00 | 21.49 |
| ATOM | 676 | CB  | GLU | 1562 | 2.369  | -2.179 | 18.630 | 1.00 | 16.65 |
| ATOM | 677 | CG  | GLU | 1562 | 1.312  | -3.115 | 18.092 | 1.00 | 19.71 |
| ATOM | 678 | CD  | GLU | 1562 | 1.895  | -4.356 | 17.460 | 1.00 | 21.58 |
| ATOM | 679 | OE1 | GLU | 1562 | 1.281  | -5.432 | 17.572 | 1.00 | 24.28 |
| ATOM | 680 | OE2 | GLU | 1562 | 2.956  | -4.260 | 16.825 | 1.00 | 23.74 |
| ATOM | 681 | C   | GLU | 1562 | 2.802  | -0.261 | 20.158 | 1.00 | 23.56 |
| ATOM | 682 | O   | GLU | 1562 | 3.581  | 0.578  | 19.738 | 1.00 | 24.82 |
| ATOM | 683 | N   | TYR | 1563 | 2.787  | -0.665 | 21.422 | 1.00 | 26.96 |
| ATOM | 684 | CA  | TYR | 1563 | 3.677  | -0.132 | 22.442 | 1.00 | 28.98 |
| ATOM | 685 | CB  | TYR | 1563 | 2.907  | 0.035  | 23.744 | 1.00 | 30.34 |
| ATOM | 686 | CG  | TYR | 1563 | 3.744  | 0.456  | 24.929 | 1.00 | 33.86 |
| ATOM | 687 | CD1 | TYR | 1563 | 4.457  | 1.653  | 24.915 | 1.00 | 36.58 |
| ATOM | 688 | CE1 | TYR | 1563 | 5.195  | 2.069  | 26.021 | 1.00 | 36.89 |
| ATOM | 689 | CD2 | TYR | 1563 | 3.787  | -0.322 | 26.082 | 1.00 | 34.25 |
| ATOM | 690 | CE2 | TYR | 1563 | 4.522  | 0.080  | 27.186 | 1.00 | 34.47 |
| ATOM | 691 | CZ  | TYR | 1563 | 5.219  | 1.273  | 27.150 | 1.00 | 37.08 |
| ATOM | 692 | OH  | TYR | 1563 | 5.965  | 1.662  | 28.228 | 1.00 | 44.10 |
| ATOM | 693 | C   | TYR | 1563 | 4.884  | -1.043 | 22.668 | 1.00 | 30.53 |
| ATOM | 694 | O   | TYR | 1563 | 4.745  | -2.269 | 22.751 | 1.00 | 30.66 |
| ATOM | 695 | N   | ALA | 1564 | 6.068  | -0.440 | 22.779 | 1.00 | 31.09 |
| ATOM | 696 | CA  | ALA | 1564 | 7.303  | -1.192 | 22.998 | 1.00 | 31.00 |
| ATOM | 697 | CB  | ALA | 1564 | 8.236  | -1.026 | 21.792 | 1.00 | 30.82 |
| ATOM | 698 | C   | ALA | 1564 | 7.940  | -0.663 | 24.283 | 1.00 | 29.32 |
| ATOM | 699 | O   | ALA | 1564 | 8.703  | 0.309  | 24.274 | 1.00 | 32.26 |
| ATOM | 700 | N   | SER | 1565 | 7.603  | -1.303 | 25.389 | 1.00 | 29.55 |
| ATOM | 701 | CA  | SER | 1565 | 8.059  | -0.884 | 26.712 | 1.00 | 30.89 |
| ATOM | 702 | CB  | SER | 1565 | 7.392  | -1.729 | 27.792 | 1.00 | 29.79 |
| ATOM | 703 | OG  | SER | 1565 | 7.704  | -3.094 | 27.611 | 1.00 | 30.94 |
| ATOM | 704 | C   | SER | 1565 | 9.547  | -0.840 | 26.986 | 1.00 | 31.39 |
| ATOM | 705 | O   | SER | 1565 | 9.978  | -0.150 | 27.902 | 1.00 | 35.74 |
| ATOM | 706 | N   | LYS | 1566 | 10.340 | -1.576 | 26.229 | 1.00 | 30.03 |
| ATOM | 707 | CA  | LYS | 1566 | 11.756 | -1.560 | 26.495 | 1.00 | 28.80 |
| ATOM | 708 | CB  | LYS | 1566 | 12.322 | -2.973 | 26.447 | 1.00 | 28.98 |
| ATOM | 709 | CG  | LYS | 1566 | 11.756 | -3.842 | 27.563 | 1.00 | 25.35 |
| ATOM | 710 | CD  | LYS | 1566 | 12.208 | -5.279 | 27.459 | 1.00 | 30.93 |
| ATOM | 711 | CE  | LYS | 1566 | 11.875 | -6.001 | 28.747 | 1.00 | 31.41 |
| ATOM | 712 | NZ  | LYS | 1566 | 12.315 | -7.421 | 28.716 | 1.00 | 32.83 |
| ATOM | 713 | C   | LYS | 1566 | 12.529 | -0.595 | 25.623 | 1.00 | 29.93 |
| ATOM | 714 | O   | LYS | 1566 | 13.756 | -0.672 | 25.544 | 1.00 | 30.89 |
| ATOM | 715 | N   | GLY | 1567 | 11.799 | 0.322  | 24.979 | 1.00 | 30.67 |
| ATOM | 716 | CA  | GLY | 1567 | 12.423 | 1.328  | 24.138 | 1.00 | 28.44 |
| ATOM | 717 | C   | GLY | 1567 | 13.136 | 0.874  | 22.875 | 1.00 | 27.19 |
| ATOM | 718 | O   | GLY | 1567 | 12.919 | -0.235 | 22.395 | 1.00 | 25.36 |
| ATOM | 719 | N   | ASN | 1568 | 14.011 | 1.731  | 22.352 | 1.00 | 28.39 |
| ATOM | 720 | CA  | ASN | 1568 | 14.735 | 1.421  | 21.130 | 1.00 | 28.41 |
| ATOM | 721 | CB  | ASN | 1568 | 15.188 | 2.698  | 20.418 | 1.00 | 30.32 |
| ATOM | 722 | CG  | ASN | 1568 | 16.396 | 3.352  | 21.058 | 1.00 | 33.42 |



|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 723 | OD1 | ASN | 1568 | 17.418 | 2.720  | 21.317 | 1.00 | 35.16 |
| ATOM | 724 | ND2 | ASN | 1568 | 16.328 | 4.661  | 21.203 | 1.00 | 36.23 |
| ATOM | 725 | C   | ASN | 1568 | 15.884 | 0.443  | 21.314 | 1.00 | 28.34 |
| ATOM | 726 | O   | ASN | 1568 | 16.478 | 0.373  | 22.388 | 1.00 | 30.67 |
| ATOM | 727 | N   | LEU | 1569 | 16.212 | -0.270 | 20.244 | 1.00 | 27.65 |
| ATOM | 728 | CA  | LEU | 1569 | 17.269 | -1.270 | 20.247 | 1.00 | 29.10 |
| ATOM | 729 | CB  | LEU | 1569 | 17.311 | -1.974 | 18.880 | 1.00 | 27.49 |
| ATOM | 730 | CG  | LEU | 1569 | 18.292 | -3.130 | 18.657 | 1.00 | 28.82 |
| ATOM | 731 | CD1 | LEU | 1569 | 18.236 | -4.140 | 19.825 | 1.00 | 24.68 |
| ATOM | 732 | CD2 | LEU | 1569 | 17.994 | -3.791 | 17.316 | 1.00 | 22.26 |
| ATOM | 733 | C   | LEU | 1569 | 18.667 | -0.790 | 20.676 | 1.00 | 29.37 |
| ATOM | 734 | O   | LEU | 1569 | 19.389 | -1.525 | 21.355 | 1.00 | 29.72 |
| ATOM | 735 | N   | ARG | 1570 | 19.058 | 0.425  | 20.303 | 1.00 | 30.89 |
| ATOM | 736 | CA  | ARG | 1570 | 20.374 | 0.943  | 20.689 | 1.00 | 33.01 |
| ATOM | 737 | CB  | ARG | 1570 | 20.591 | 2.353  | 20.121 | 1.00 | 30.95 |
| ATOM | 738 | CG  | ARG | 1570 | 21.896 | 2.983  | 20.584 | 1.00 | 38.85 |
| ATOM | 739 | CD  | ARG | 1570 | 21.968 | 4.472  | 20.303 | 1.00 | 43.03 |
| ATOM | 740 | NE  | ARG | 1570 | 20.749 | 5.192  | 20.670 | 1.00 | 53.34 |
| ATOM | 741 | CZ  | ARG | 1570 | 20.404 | 5.573  | 21.905 | 1.00 | 57.49 |
| ATOM | 742 | NH1 | ARG | 1570 | 21.184 | 5.310  | 22.955 | 1.00 | 55.59 |
| ATOM | 743 | NH2 | ARG | 1570 | 19.272 | 6.252  | 22.086 | 1.00 | 59.53 |
| ATOM | 744 | C   | ARG | 1570 | 20.475 | 0.947  | 22.229 | 1.00 | 33.82 |
| ATOM | 745 | O   | ARG | 1570 | 21.351 | 0.296  | 22.817 | 1.00 | 33.93 |
| ATOM | 746 | N   | GLU | 1571 | 19.528 | 1.639  | 22.865 | 1.00 | 33.91 |
| ATOM | 747 | CA  | GLU | 1571 | 19.435 | 1.746  | 24.317 | 1.00 | 32.59 |
| ATOM | 748 | CB  | GLU | 1571 | 18.177 | 2.524  | 24.675 | 1.00 | 36.40 |
| ATOM | 749 | CG  | GLU | 1571 | 18.174 | 3.958  | 24.175 | 1.00 | 45.91 |
| ATOM | 750 | CD  | GLU | 1571 | 16.822 | 4.654  | 24.328 | 1.00 | 52.95 |
| ATOM | 751 | OE1 | GLU | 1571 | 15.793 | 3.959  | 24.529 | 1.00 | 54.50 |
| ATOM | 752 | OE2 | GLU | 1571 | 16.792 | 5.905  | 24.222 | 1.00 | 55.17 |
| ATOM | 753 | C   | GLU | 1571 | 19.380 | 0.361  | 24.959 | 1.00 | 31.40 |
| ATOM | 754 | O   | GLU | 1571 | 20.115 | 0.054  | 25.895 | 1.00 | 31.09 |
| ATOM | 755 | N   | TYR | 1572 | 18.503 | -0.477 | 24.433 | 1.00 | 29.24 |
| ATOM | 756 | CA  | TYR | 1572 | 18.334 | -1.835 | 24.920 | 1.00 | 27.43 |
| ATOM | 757 | CB  | TYR | 1572 | 17.387 | -2.590 | 23.991 | 1.00 | 26.41 |
| ATOM | 758 | CG  | TYR | 1572 | 17.196 | -4.045 | 24.311 | 1.00 | 23.13 |
| ATOM | 759 | CD1 | TYR | 1572 | 16.224 | -4.448 | 25.216 | 1.00 | 28.16 |
| ATOM | 760 | CE1 | TYR | 1572 | 15.983 | -5.784 | 25.456 | 1.00 | 28.32 |
| ATOM | 761 | CD2 | TYR | 1572 | 17.936 | -5.024 | 23.665 | 1.00 | 20.00 |
| ATOM | 762 | CE2 | TYR | 1572 | 17.699 | -6.361 | 23.899 | 1.00 | 22.28 |
| ATOM | 763 | CZ  | TYR | 1572 | 16.721 | -6.731 | 24.801 | 1.00 | 26.53 |
| ATOM | 764 | OH  | TYR | 1572 | 16.479 | -8.058 | 25.055 | 1.00 | 30.25 |
| ATOM | 765 | C   | TYR | 1572 | 19.671 | -2.564 | 24.960 | 1.00 | 30.90 |
| ATOM | 766 | O   | TYR | 1572 | 19.953 | -3.323 | 25.901 | 1.00 | 30.68 |
| ATOM | 767 | N   | LEU | 1573 | 20.487 | -2.337 | 23.933 | 1.00 | 31.27 |
| ATOM | 768 | CA  | LEU | 1573 | 21.776 | -2.995 | 23.841 | 1.00 | 33.33 |
| ATOM | 769 | CB  | LEU | 1573 | 22.287 | -2.975 | 22.399 | 1.00 | 30.85 |
| ATOM | 770 | CG  | LEU | 1573 | 21.643 | -3.908 | 21.370 | 1.00 | 26.92 |
| ATOM | 771 | CD1 | LEU | 1573 | 22.144 | -3.546 | 19.980 | 1.00 | 22.76 |
| ATOM | 772 | CD2 | LEU | 1573 | 21.939 | -5.372 | 21.695 | 1.00 | 25.82 |
| ATOM | 773 | C   | LEU | 1573 | 22.801 | -2.390 | 24.791 | 1.00 | 36.07 |
| ATOM | 774 | O   | LEU | 1573 | 23.544 | -3.117 | 25.457 | 1.00 | 36.40 |

|      |     |     |     |      |        |        |        |      |       |
|------|-----|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 775 | N   | GLN | 1574 | 22.815 | -1.065 | 24.887 | 1.00 | 37.25 |
| ATOM | 776 | CA  | GLN | 1574 | 23.763 | -0.391 | 25.759 | 1.00 | 37.41 |
| ATOM | 777 | CB  | GLN | 1574 | 23.722 | 1.119  | 25.522 | 1.00 | 38.07 |
| ATOM | 778 | CG  | GLN | 1574 | 24.240 | 1.529  | 24.147 | 1.00 | 40.76 |
| ATOM | 779 | CD  | GLN | 1574 | 24.046 | 3.009  | 23.851 | 1.00 | 44.73 |
| ATOM | 780 | OE1 | GLN | 1574 | 23.391 | 3.740  | 24.597 | 1.00 | 46.47 |
| ATOM | 781 | NE2 | GLN | 1574 | 24.606 | 3.452  | 22.732 | 1.00 | 46.93 |
| ATOM | 782 | C   | GLN | 1574 | 23.502 | -0.711 | 27.233 | 1.00 | 37.80 |
| ATOM | 783 | O   | GLN | 1574 | 24.431 | -0.988 | 27.990 | 1.00 | 38.55 |
| ATOM | 784 | N   | ALA | 1575 | 22.229 | -0.742 | 27.617 | 1.00 | 37.28 |
| ATOM | 785 | CA  | ALA | 1575 | 21.846 | -1.021 | 28.987 | 1.00 | 35.47 |
| ATOM | 786 | CB  | ALA | 1575 | 20.394 | -0.669 | 29.178 | 1.00 | 31.42 |
| ATOM | 787 | C   | ALA | 1575 | 22.102 | -2.473 | 29.424 | 1.00 | 38.30 |
| ATOM | 788 | O   | ALA | 1575 | 21.758 | -2.843 | 30.544 | 1.00 | 41.11 |
| ATOM | 789 | N   | ARG | 1576 | 22.647 | -3.299 | 28.528 | 1.00 | 37.59 |
| ATOM | 790 | CA  | ARG | 1576 | 22.943 | -4.687 | 28.869 | 1.00 | 37.23 |
| ATOM | 791 | CB  | ARG | 1576 | 22.027 | -5.636 | 28.111 | 1.00 | 36.82 |
| ATOM | 792 | CG  | ARG | 1576 | 20.599 | -5.481 | 28.561 | 1.00 | 34.61 |
| ATOM | 793 | CD  | ARG | 1576 | 19.649 | -6.146 | 27.640 | 1.00 | 31.82 |
| ATOM | 794 | NE  | ARG | 1576 | 18.308 | -6.147 | 28.201 | 1.00 | 31.54 |
| ATOM | 795 | CZ  | ARG | 1576 | 17.590 | -5.051 | 28.426 | 1.00 | 33.71 |
| ATOM | 796 | NH1 | ARG | 1576 | 18.086 | -3.855 | 28.149 | 1.00 | 33.68 |
| ATOM | 797 | NH2 | ARG | 1576 | 16.337 | -5.160 | 28.857 | 1.00 | 38.97 |
| ATOM | 798 | C   | ARG | 1576 | 24.405 | -5.052 | 28.683 | 1.00 | 38.53 |
| ATOM | 799 | O   | ARG | 1576 | 24.790 | -6.231 | 28.700 | 1.00 | 38.39 |
| ATOM | 800 | N   | ARG | 1577 | 25.226 | -4.017 | 28.538 | 1.00 | 39.28 |
| ATOM | 801 | CA  | ARG | 1577 | 26.661 | -4.185 | 28.394 | 1.00 | 39.33 |
| ATOM | 802 | CB  | ARG | 1577 | 27.306 | -2.855 | 27.998 | 1.00 | 35.44 |
| ATOM | 803 | CG  | ARG | 1577 | 27.048 | -2.402 | 26.584 | 1.00 | 33.45 |
| ATOM | 804 | CD  | ARG | 1577 | 27.696 | -1.042 | 26.330 | 1.00 | 32.83 |
| ATOM | 805 | NE  | ARG | 1577 | 27.798 | -0.747 | 24.897 | 1.00 | 36.69 |
| ATOM | 806 | CZ  | ARG | 1577 | 28.284 | 0.385  | 24.384 | 1.00 | 36.99 |
| ATOM | 807 | NH1 | ARG | 1577 | 28.719 | 1.359  | 25.175 | 1.00 | 40.35 |
| ATOM | 808 | NH2 | ARG | 1577 | 28.346 | 0.539  | 23.065 | 1.00 | 36.53 |
| ATOM | 809 | C   | ARG | 1577 | 27.222 | -4.594 | 29.754 | 1.00 | 41.24 |
| ATOM | 810 | O   | ARG | 1577 | 26.652 | -4.244 | 30.796 | 1.00 | 41.03 |
| ATOM | 811 | N   | PRO | 1578 | 28.307 | -5.381 | 29.769 | 1.00 | 44.39 |
| ATOM | 812 | CD  | PRO | 1578 | 29.038 | -6.041 | 28.667 | 1.00 | 44.50 |
| ATOM | 813 | CA  | PRO | 1578 | 28.877 | -5.766 | 31.066 | 1.00 | 44.89 |
| ATOM | 814 | CB  | PRO | 1578 | 29.933 | -6.809 | 30.686 | 1.00 | 42.49 |
| ATOM | 815 | CG  | PRO | 1578 | 30.352 | -6.391 | 29.327 | 1.00 | 43.63 |
| ATOM | 816 | C   | PRO | 1578 | 29.490 | -4.493 | 31.672 | 1.00 | 45.20 |
| ATOM | 817 | O   | PRO | 1578 | 29.814 | -3.538 | 30.947 | 1.00 | 44.68 |
| ATOM | 818 | N   | PRO | 1579 | 29.604 | -4.432 | 33.003 | 1.00 | 46.51 |
| ATOM | 819 | CD  | PRO | 1579 | 29.208 | -5.463 | 33.981 | 1.00 | 46.36 |
| ATOM | 820 | CA  | PRO | 1579 | 30.169 | -3.265 | 33.685 | 1.00 | 47.56 |
| ATOM | 821 | CB  | PRO | 1579 | 30.175 | -3.708 | 35.141 | 1.00 | 46.45 |
| ATOM | 822 | CG  | PRO | 1579 | 28.997 | -4.638 | 35.205 | 1.00 | 47.51 |
| ATOM | 823 | C   | PRO | 1579 | 31.575 | -2.904 | 33.200 | 1.00 | 50.19 |
| ATOM | 824 | O   | PRO | 1579 | 32.481 | -3.739 | 33.196 | 1.00 | 53.53 |
| ATOM | 825 | N   | ALA | 1592 | 19.097 | -5.342 | 32.478 | 1.00 | 60.30 |
| ATOM | 826 | CA  | ALA | 1592 | 20.535 | -5.076 | 32.445 | 1.00 | 59.47 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 827 | CB  | ALA | 1592 | 20.975 | -4.338  | 33.715 | 1.00 | 61.58 |
| ATOM | 828 | C   | ALA | 1592 | 21.367 | -6.350  | 32.252 | 1.00 | 58.15 |
| ATOM | 829 | O   | ALA | 1592 | 22.543 | -6.285  | 31.879 | 1.00 | 59.09 |
| ATOM | 830 | N   | ALA | 1593 | 20.754 | -7.510  | 32.479 | 1.00 | 55.79 |
| ATOM | 831 | CA  | ALA | 1593 | 21.457 | -8.775  | 32.324 | 1.00 | 55.06 |
| ATOM | 832 | CB  | ALA | 1593 | 20.519 | -9.939  | 32.604 | 1.00 | 57.05 |
| ATOM | 833 | C   | ALA | 1593 | 22.053 | -8.897  | 30.924 | 1.00 | 53.57 |
| ATOM | 834 | O   | ALA | 1593 | 21.402 | -8.598  | 29.926 | 1.00 | 53.85 |
| ATOM | 835 | N   | GLN | 1594 | 23.303 | -9.336  | 30.862 | 1.00 | 53.22 |
| ATOM | 836 | CA  | GLN | 1594 | 24.004 | -9.490  | 29.599 | 1.00 | 50.13 |
| ATOM | 837 | CB  | GLN | 1594 | 25.400 | -10.082 | 29.832 | 1.00 | 50.73 |
| ATOM | 838 | CG  | GLN | 1594 | 26.308 | -9.253  | 30.743 | 1.00 | 54.69 |
| ATOM | 839 | CD  | GLN | 1594 | 27.550 | -10.019 | 31.217 | 1.00 | 57.79 |
| ATOM | 840 | OE1 | GLN | 1594 | 28.075 | -10.900 | 30.524 | 1.00 | 58.82 |
| ATOM | 841 | NE2 | GLN | 1594 | 28.026 | -9.673  | 32.407 | 1.00 | 59.53 |
| ATOM | 842 | C   | GLN | 1594 | 23.210 | -10.374 | 28.637 | 1.00 | 47.73 |
| ATOM | 843 | O   | GLN | 1594 | 22.427 | -11.241 | 29.054 | 1.00 | 47.09 |
| ATOM | 844 | N   | LEU | 1595 | 23.418 | -10.133 | 27.350 | 1.00 | 45.64 |
| ATOM | 845 | CA  | LEU | 1595 | 22.758 | -10.880 | 26.292 | 1.00 | 42.00 |
| ATOM | 846 | CB  | LEU | 1595 | 22.405 | -9.947  | 25.122 | 1.00 | 37.98 |
| ATOM | 847 | CG  | LEU | 1595 | 21.345 | -8.894  | 25.446 | 1.00 | 37.70 |
| ATOM | 848 | CD1 | LEU | 1595 | 21.568 | -7.611  | 24.660 | 1.00 | 33.34 |
| ATOM | 849 | CD2 | LEU | 1595 | 19.971 | -9.479  | 25.222 | 1.00 | 32.84 |
| ATOM | 850 | C   | LEU | 1595 | 23.729 | -11.944 | 25.828 | 1.00 | 40.92 |
| ATOM | 851 | O   | LEU | 1595 | 24.944 | -11.745 | 25.855 | 1.00 | 41.12 |
| ATOM | 852 | N   | SER | 1596 | 23.201 | -13.103 | 25.471 | 1.00 | 40.09 |
| ATOM | 853 | CA  | SER | 1596 | 24.044 | -14.178 | 24.985 | 1.00 | 38.93 |
| ATOM | 854 | CB  | SER | 1596 | 23.388 | -15.535 | 25.235 | 1.00 | 37.45 |
| ATOM | 855 | OG  | SER | 1596 | 22.158 | -15.662 | 24.545 | 1.00 | 39.49 |
| ATOM | 856 | C   | SER | 1596 | 24.302 | -13.987 | 23.499 | 1.00 | 39.41 |
| ATOM | 857 | O   | SER | 1596 | 23.634 | -13.183 | 22.832 | 1.00 | 39.51 |
| ATOM | 858 | N   | SER | 1597 | 25.266 | -14.738 | 22.977 | 1.00 | 39.17 |
| ATOM | 859 | CA  | SER | 1597 | 25.587 | -14.667 | 21.563 | 1.00 | 40.23 |
| ATOM | 860 | CB  | SER | 1597 | 26.740 | -15.611 | 21.230 | 1.00 | 39.96 |
| ATOM | 861 | OG  | SER | 1597 | 27.865 | -15.339 | 22.048 | 1.00 | 46.60 |
| ATOM | 862 | C   | SER | 1597 | 24.347 | -15.057 | 20.773 | 1.00 | 39.65 |
| ATOM | 863 | O   | SER | 1597 | 24.066 | -14.469 | 19.725 | 1.00 | 41.13 |
| ATOM | 864 | N   | LYS | 1598 | 23.590 | -16.023 | 21.291 | 1.00 | 36.82 |
| ATOM | 865 | CA  | LYS | 1598 | 22.390 | -16.467 | 20.611 | 1.00 | 36.17 |
| ATOM | 866 | CB  | LYS | 1598 | 21.827 | -17.742 | 21.217 | 1.00 | 36.19 |
| ATOM | 867 | CG  | LYS | 1598 | 21.030 | -18.562 | 20.180 | 1.00 | 39.59 |
| ATOM | 868 | CD  | LYS | 1598 | 20.150 | -19.623 | 20.830 | 1.00 | 37.49 |
| ATOM | 869 | CE  | LYS | 1598 | 19.769 | -20.719 | 19.855 | 1.00 | 39.64 |
| ATOM | 870 | NZ  | LYS | 1598 | 20.976 | -21.437 | 19.380 | 1.00 | 41.43 |
| ATOM | 871 | C   | LYS | 1598 | 21.340 | -15.381 | 20.649 | 1.00 | 37.72 |
| ATOM | 872 | O   | LYS | 1598 | 20.604 | -15.213 | 19.677 | 1.00 | 39.82 |
| ATOM | 873 | N   | ASP | 1599 | 21.291 | -14.627 | 21.752 | 1.00 | 36.20 |
| ATOM | 874 | CA  | ASP | 1599 | 20.331 | -13.530 | 21.907 | 1.00 | 33.96 |
| ATOM | 875 | CB  | ASP | 1599 | 20.456 | -12.884 | 23.279 | 1.00 | 35.66 |
| ATOM | 876 | CG  | ASP | 1599 | 19.913 | -13.744 | 24.394 | 1.00 | 36.18 |
| ATOM | 877 | OD1 | ASP | 1599 | 20.365 | -13.565 | 25.544 | 1.00 | 39.14 |
| ATOM | 878 | OD2 | ASP | 1599 | 19.036 | -14.593 | 24.128 | 1.00 | 33.40 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 879 | C   | ASP | 1599 | 20.595 | -12.471 | 20.857 | 1.00 | 33.57 |
| ATOM | 880 | O   | ASP | 1599 | 19.660 | -11.953 | 20.225 | 1.00 | 32.60 |
| ATOM | 881 | N   | LEU | 1600 | 21.871 | -12.123 | 20.706 | 1.00 | 32.82 |
| ATOM | 882 | CA  | LEU | 1600 | 22.304 | -11.121 | 19.735 | 1.00 | 31.14 |
| ATOM | 883 | CB  | LEU | 1600 | 23.804 | -10.850 | 19.916 | 1.00 | 30.23 |
| ATOM | 884 | CG  | LEU | 1600 | 24.174 | -10.153 | 21.242 | 1.00 | 27.52 |
| ATOM | 885 | CD1 | LEU | 1600 | 25.660 | -9.877  | 21.324 | 1.00 | 24.11 |
| ATOM | 886 | CD2 | LEU | 1600 | 23.408 | -8.857  | 21.369 | 1.00 | 21.94 |
| ATOM | 887 | C   | LEU | 1600 | 21.964 | -11.523 | 18.291 | 1.00 | 29.24 |
| ATOM | 888 | O   | LEU | 1600 | 21.385 | -10.734 | 17.541 | 1.00 | 27.61 |
| ATOM | 889 | N   | VAL | 1601 | 22.271 | -12.764 | 17.930 | 1.00 | 27.38 |
| ATOM | 890 | CA  | VAL | 1601 | 21.983 | -13.268 | 16.597 | 1.00 | 27.26 |
| ATOM | 891 | CB  | VAL | 1601 | 22.648 | -14.649 | 16.345 | 1.00 | 30.47 |
| ATOM | 892 | CG1 | VAL | 1601 | 22.403 | -15.104 | 14.921 | 1.00 | 28.72 |
| ATOM | 893 | CG2 | VAL | 1601 | 24.156 | -14.568 | 16.593 | 1.00 | 29.92 |
| ATOM | 894 | C   | VAL | 1601 | 20.474 | -13.353 | 16.399 | 1.00 | 26.23 |
| ATOM | 895 | O   | VAL | 1601 | 19.991 | -13.147 | 15.295 | 1.00 | 25.54 |
| ATOM | 896 | N   | SER | 1602 | 19.733 | -13.590 | 17.478 | 1.00 | 27.43 |
| ATOM | 897 | CA  | SER | 1602 | 18.277 | -13.671 | 17.406 | 1.00 | 27.09 |
| ATOM | 898 | CB  | SER | 1602 | 17.731 | -14.259 | 18.694 | 1.00 | 29.02 |
| ATOM | 899 | OG  | SER | 1602 | 16.317 | -14.306 | 18.646 | 1.00 | 35.77 |
| ATOM | 900 | C   | SER | 1602 | 17.669 | -12.280 | 17.149 | 1.00 | 26.87 |
| ATOM | 901 | O   | SER | 1602 | 16.643 | -12.141 | 16.465 | 1.00 | 25.13 |
| ATOM | 902 | N   | CYS | 1603 | 18.289 | -11.262 | 17.737 | 1.00 | 26.09 |
| ATOM | 903 | CA  | CYS | 1603 | 17.878 | -9.871  | 17.561 | 1.00 | 24.81 |
| ATOM | 904 | CB  | CYS | 1603 | 18.797 | -8.937  | 18.350 | 1.00 | 23.87 |
| ATOM | 905 | SG  | CYS | 1603 | 18.512 | -7.186  | 18.059 | 0.50 | 24.17 |
| ATOM | 906 | C   | CYS | 1603 | 17.994 | -9.517  | 16.090 | 1.00 | 25.24 |
| ATOM | 907 | O   | CYS | 1603 | 17.083 | -8.932  | 15.520 | 1.00 | 27.48 |
| ATOM | 908 | N   | ALA | 1604 | 19.138 | -9.854  | 15.492 | 1.00 | 26.80 |
| ATOM | 909 | CA  | ALA | 1604 | 19.422 | -9.592  | 14.073 | 1.00 | 26.15 |
| ATOM | 910 | CB  | ALA | 1604 | 20.851 | -10.035 | 13.741 | 1.00 | 24.35 |
| ATOM | 911 | C   | ALA | 1604 | 18.419 | -10.302 | 13.168 | 1.00 | 26.61 |
| ATOM | 912 | O   | ALA | 1604 | 17.894 | -9.713  | 12.226 | 1.00 | 28.81 |
| ATOM | 913 | N   | TYR | 1605 | 18.130 | -11.557 | 13.488 | 1.00 | 27.10 |
| ATOM | 914 | CA  | TYR | 1605 | 17.175 | -12.359 | 12.730 | 1.00 | 27.02 |
| ATOM | 915 | CB  | TYR | 1605 | 17.104 | -13.751 | 13.334 | 1.00 | 27.35 |
| ATOM | 916 | CG  | TYR | 1605 | 15.997 | -14.608 | 12.789 | 1.00 | 31.67 |
| ATOM | 917 | CD1 | TYR | 1605 | 16.109 | -15.244 | 11.546 | 1.00 | 32.96 |
| ATOM | 918 | CE1 | TYR | 1605 | 15.069 | -16.049 | 11.053 | 1.00 | 29.27 |
| ATOM | 919 | CD2 | TYR | 1605 | 14.830 | -14.797 | 13.520 | 1.00 | 31.42 |
| ATOM | 920 | CE2 | TYR | 1605 | 13.801 | -15.596 | 13.038 | 1.00 | 28.20 |
| ATOM | 921 | CZ  | TYR | 1605 | 13.922 | -16.212 | 11.810 | 1.00 | 29.20 |
| ATOM | 922 | OH  | TYR | 1605 | 12.855 | -16.944 | 11.364 | 1.00 | 27.90 |
| ATOM | 923 | C   | TYR | 1605 | 15.766 | -11.735 | 12.658 | 1.00 | 27.90 |
| ATOM | 924 | O   | TYR | 1605 | 15.180 | -11.635 | 11.578 | 1.00 | 28.40 |
| ATOM | 925 | N   | GLN | 1606 | 15.231 | -11.319 | 13.807 | 1.00 | 27.12 |
| ATOM | 926 | CA  | GLN | 1606 | 13.907 | -10.699 | 13.892 | 1.00 | 25.32 |
| ATOM | 927 | CB  | GLN | 1606 | 13.561 | -10.383 | 15.342 | 1.00 | 24.31 |
| ATOM | 928 | CG  | GLN | 1606 | 13.329 | -11.608 | 16.210 | 1.00 | 25.05 |
| ATOM | 929 | CD  | GLN | 1606 | 13.052 | -11.243 | 17.649 | 1.00 | 26.35 |
| ATOM | 930 | OE1 | GLN | 1606 | 12.087 | -10.542 | 17.944 | 1.00 | 26.11 |

|      |     |     |     |      |        |         |        |      |       |
|------|-----|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 931 | NE2 | GLN | 1606 | 13.917 | -11.684 | 18.551 | 1.00 | 27.77 |
| ATOM | 932 | C   | GLN | 1606 | 13.849 | -9.415  | 13.078 | 1.00 | 27.52 |
| ATOM | 933 | O   | GLN | 1606 | 12.825 | -9.089  | 12.455 | 1.00 | 27.87 |
| ATOM | 934 | N   | VAL | 1607 | 14.943 | -8.662  | 13.122 | 1.00 | 27.90 |
| ATOM | 935 | CA  | VAL | 1607 | 15.053 | -7.419  | 12.359 | 1.00 | 26.41 |
| ATOM | 936 | CB  | VAL | 1607 | 16.337 | -6.661  | 12.731 | 1.00 | 25.61 |
| ATOM | 937 | CG1 | VAL | 1607 | 16.545 | -5.457  | 11.800 | 1.00 | 27.37 |
| ATOM | 938 | CG2 | VAL | 1607 | 16.277 | -6.224  | 14.190 | 1.00 | 21.50 |
| ATOM | 939 | C   | VAL | 1607 | 15.035 | -7.718  | 10.860 | 1.00 | 26.09 |
| ATOM | 940 | O   | VAL | 1607 | 14.337 | -7.046  | 10.096 | 1.00 | 28.48 |
| ATOM | 941 | N   | ALA | 1608 | 15.795 | -8.722  | 10.435 | 1.00 | 23.05 |
| ATOM | 942 | CA  | ALA | 1608 | 15.812 | -9.079  | 9.027  | 1.00 | 20.32 |
| ATOM | 943 | CB  | ALA | 1608 | 16.823 | -10.145 | 8.783  | 1.00 | 14.95 |
| ATOM | 944 | C   | ALA | 1608 | 14.418 | -9.558  | 8.600  | 1.00 | 23.08 |
| ATOM | 945 | O   | ALA | 1608 | 14.033 | -9.405  | 7.432  | 1.00 | 23.91 |
| ATOM | 946 | N   | ARG | 1609 | 13.671 | -10.169 | 9.530  | 1.00 | 24.57 |
| ATOM | 947 | CA  | ARG | 1609 | 12.314 | -10.628 | 9.246  | 1.00 | 24.30 |
| ATOM | 948 | CB  | ARG | 1609 | 11.822 | -11.577 | 10.326 | 1.00 | 26.13 |
| ATOM | 949 | CG  | ARG | 1609 | 12.278 | -12.979 | 10.114 | 1.00 | 31.07 |
| ATOM | 950 | CD  | ARG | 1609 | 11.449 | -13.885 | 10.939 | 1.00 | 36.13 |
| ATOM | 951 | NE  | ARG | 1609 | 10.771 | -14.865 | 10.115 | 1.00 | 38.37 |
| ATOM | 952 | CZ  | ARG | 1609 | 9.931  | -15.778 | 10.594 | 1.00 | 37.95 |
| ATOM | 953 | NH1 | ARG | 1609 | 9.674  | -15.828 | 11.898 | 1.00 | 35.31 |
| ATOM | 954 | NH2 | ARG | 1609 | 9.353  | -16.649 | 9.776  | 1.00 | 37.85 |
| ATOM | 955 | C   | ARG | 1609 | 11.318 | -9.490  | 9.065  | 1.00 | 22.34 |
| ATOM | 956 | O   | ARG | 1609 | 10.470 | -9.542  | 8.160  | 1.00 | 24.57 |
| ATOM | 957 | N   | GLY | 1610 | 11.375 | -8.500  | 9.948  | 1.00 | 20.52 |
| ATOM | 958 | CA  | GLY | 1610 | 10.497 | -7.353  | 9.827  | 1.00 | 19.33 |
| ATOM | 959 | C   | GLY | 1610 | 10.732 | -6.715  | 8.464  | 1.00 | 20.04 |
| ATOM | 960 | O   | GLY | 1610 | 9.794  | -6.455  | 7.693  | 1.00 | 19.10 |
| ATOM | 961 | N   | MET | 1611 | 12.011 | -6.545  | 8.130  | 1.00 | 18.21 |
| ATOM | 962 | CA  | MET | 1611 | 12.423 | -5.970  | 6.851  | 1.00 | 20.32 |
| ATOM | 963 | CB  | MET | 1611 | 13.925 | -5.737  | 6.838  | 1.00 | 19.20 |
| ATOM | 964 | CG  | MET | 1611 | 14.371 | -4.547  | 7.694  | 1.00 | 20.83 |
| ATOM | 965 | SD  | MET | 1611 | 13.449 | -2.960  | 7.422  | 1.00 | 25.39 |
| ATOM | 966 | CE  | MET | 1611 | 13.869 | -2.525  | 5.757  | 1.00 | 18.67 |
| ATOM | 967 | C   | MET | 1611 | 12.024 | -6.843  | 5.670  | 1.00 | 23.98 |
| ATOM | 968 | O   | MET | 1611 | 11.608 | -6.332  | 4.613  | 1.00 | 24.13 |
| ATOM | 969 | N   | GLU | 1612 | 12.141 | -8.162  | 5.825  | 1.00 | 25.76 |
| ATOM | 970 | CA  | GLU | 1612 | 11.759 | -9.059  | 4.743  | 1.00 | 25.49 |
| ATOM | 971 | CB  | GLU | 1612 | 11.980 | -10.522 | 5.110  | 1.00 | 26.09 |
| ATOM | 972 | CG  | GLU | 1612 | 11.587 | -11.468 | 3.968  | 1.00 | 26.56 |
| ATOM | 973 | CD  | GLU | 1612 | 11.735 | -12.942 | 4.313  | 1.00 | 29.26 |
| ATOM | 974 | OE1 | GLU | 1612 | 11.386 | -13.316 | 5.448  | 1.00 | 29.10 |
| ATOM | 975 | OE2 | GLU | 1612 | 12.190 | -13.725 | 3.443  | 1.00 | 31.11 |
| ATOM | 976 | C   | GLU | 1612 | 10.283 | -8.821  | 4.398  | 1.00 | 26.29 |
| ATOM | 977 | O   | GLU | 1612 | 9.916  | -8.728  | 3.226  | 1.00 | 28.46 |
| ATOM | 978 | N   | TYR | 1613 | 9.437  | -8.700  | 5.422  | 1.00 | 24.78 |
| ATOM | 979 | CA  | TYR | 1613 | 8.003  | -8.456  | 5.212  | 1.00 | 23.07 |
| ATOM | 980 | CB  | TYR | 1613 | 7.263  | -8.526  | 6.549  | 1.00 | 23.75 |
| ATOM | 981 | CG  | TYR | 1613 | 5.785  | -8.218  | 6.449  | 1.00 | 20.80 |
| ATOM | 982 | CD1 | TYR | 1613 | 4.880  | -9.213  | 6.062  | 1.00 | 20.97 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 983  | CE1 | TYR | 1613 | 3.517  | -8.944 | 5.958  | 1.00 | 20.03 |
| ATOM | 984  | CD2 | TYR | 1613 | 5.289  | -6.938 | 6.731  | 1.00 | 19.72 |
| ATOM | 985  | CE2 | TYR | 1613 | 3.926  | -6.661 | 6.628  | 1.00 | 21.87 |
| ATOM | 986  | CZ  | TYR | 1613 | 3.046  | -7.672 | 6.244  | 1.00 | 24.87 |
| ATOM | 987  | OH  | TYR | 1613 | 1.694  | -7.420 | 6.161  | 1.00 | 24.37 |
| ATOM | 988  | C   | TYR | 1613 | 7.766  | -7.094 | 4.550  | 1.00 | 21.68 |
| ATOM | 989  | O   | TYR | 1613 | 6.970  | -6.979 | 3.615  | 1.00 | 20.20 |
| ATOM | 990  | N   | LEU | 1614 | 8.436  | -6.065 | 5.062  | 1.00 | 21.72 |
| ATOM | 991  | CA  | LEU | 1614 | 8.321  | -4.713 | 4.519  | 1.00 | 20.42 |
| ATOM | 992  | CB  | LEU | 1614 | 9.169  | -3.747 | 5.350  | 1.00 | 17.68 |
| ATOM | 993  | CG  | LEU | 1614 | 8.607  | -3.395 | 6.733  | 1.00 | 18.47 |
| ATOM | 994  | CD1 | LEU | 1614 | 9.504  | -2.425 | 7.470  | 1.00 | 16.59 |
| ATOM | 995  | CD2 | LEU | 1614 | 7.230  | -2.795 | 6.558  | 1.00 | 14.07 |
| ATOM | 996  | C   | LEU | 1614 | 8.729  | -4.676 | 3.043  | 1.00 | 21.70 |
| ATOM | 997  | O   | LEU | 1614 | 8.073  | -4.038 | 2.211  | 1.00 | 22.25 |
| ATOM | 998  | N   | ALA | 1615 | 9.819  | -5.366 | 2.729  | 1.00 | 21.55 |
| ATOM | 999  | CA  | ALA | 1615 | 10.313 | -5.435 | 1.355  | 1.00 | 20.52 |
| ATOM | 1000 | CB  | ALA | 1615 | 11.625 | -6.207 | 1.292  | 1.00 | 19.78 |
| ATOM | 1001 | C   | ALA | 1615 | 9.264  | -6.098 | 0.491  | 1.00 | 19.98 |
| ATOM | 1002 | O   | ALA | 1615 | 8.945  | -5.587 | -0.579 | 1.00 | 20.14 |
| ATOM | 1003 | N   | SER | 1616 | 8.692  | -7.205 | 0.972  | 1.00 | 20.65 |
| ATOM | 1004 | CA  | SER | 1616 | 7.660  | -7.919 | 0.207  | 1.00 | 19.59 |
| ATOM | 1005 | CB  | SER | 1616 | 7.283  | -9.217 | 0.912  | 1.00 | 15.96 |
| ATOM | 1006 | OG  | SER | 1616 | 6.415  | -8.966 | 2.007  | 1.00 | 16.62 |
| ATOM | 1007 | C   | SER | 1616 | 6.397  | -7.062 | -0.018 | 1.00 | 22.05 |
| ATOM | 1008 | O   | SER | 1616 | 5.650  | -7.266 | -0.975 | 1.00 | 23.62 |
| ATOM | 1009 | N   | LYS | 1617 | 6.136  | -6.135 | 0.895  | 1.00 | 23.39 |
| ATOM | 1010 | CA  | LYS | 1617 | 4.997  | -5.237 | 0.779  | 1.00 | 23.02 |
| ATOM | 1011 | CB  | LYS | 1617 | 4.436  | -4.881 | 2.160  | 1.00 | 21.50 |
| ATOM | 1012 | CG  | LYS | 1617 | 3.709  | -6.046 | 2.851  | 1.00 | 24.94 |
| ATOM | 1013 | CD  | LYS | 1617 | 2.463  | -6.448 | 2.059  | 1.00 | 26.57 |
| ATOM | 1014 | CE  | LYS | 1617 | 1.691  | -7.571 | 2.725  | 1.00 | 31.05 |
| ATOM | 1015 | NZ  | LYS | 1617 | 2.401  | -8.852 | 2.601  | 1.00 | 38.73 |
| ATOM | 1016 | C   | LYS | 1617 | 5.346  | -3.981 | -0.017 | 1.00 | 24.01 |
| ATOM | 1017 | O   | LYS | 1617 | 4.588  | -3.007 | -0.013 | 1.00 | 28.15 |
| ATOM | 1018 | N   | LYS | 1618 | 6.496  | -4.002 | -0.679 | 1.00 | 23.84 |
| ATOM | 1019 | CA  | LYS | 1618 | 6.957  | -2.883 | -1.528 | 1.00 | 24.05 |
| ATOM | 1020 | CB  | LYS | 1618 | 5.871  | -2.513 | -2.555 | 1.00 | 25.74 |
| ATOM | 1021 | CG  | LYS | 1618 | 5.734  | -3.465 | -3.749 | 1.00 | 28.34 |
| ATOM | 1022 | CD  | LYS | 1618 | 5.557  | -4.914 | -3.328 | 1.00 | 32.45 |
| ATOM | 1023 | CE  | LYS | 1618 | 5.590  | -5.850 | -4.520 | 1.00 | 30.41 |
| ATOM | 1024 | NZ  | LYS | 1618 | 4.373  | -5.748 | -5.354 | 1.00 | 31.84 |
| ATOM | 1025 | C   | LYS | 1618 | 7.404  | -1.610 | -0.796 | 1.00 | 23.84 |
| ATOM | 1026 | O   | LYS | 1618 | 7.533  | -0.548 | -1.402 | 1.00 | 20.60 |
| ATOM | 1027 | N   | CYS | 1619 | 7.719  | -1.744 | 0.489  | 1.00 | 25.11 |
| ATOM | 1028 | CA  | CYS | 1619 | 8.103  | -0.614 | 1.312  | 1.00 | 21.68 |
| ATOM | 1029 | CB  | CYS | 1619 | 7.338  | -0.690 | 2.643  | 1.00 | 20.84 |
| ATOM | 1030 | SG  | CYS | 1619 | 7.916  | 0.427  | 3.957  | 1.00 | 26.69 |
| ATOM | 1031 | C   | CYS | 1619 | 9.586  | -0.480 | 1.543  | 1.00 | 23.16 |
| ATOM | 1032 | O   | CYS | 1619 | 10.257 | -1.435 | 1.958  | 1.00 | 25.60 |
| ATOM | 1033 | N   | ILE | 1620 | 10.110 | 0.717  | 1.288  | 1.00 | 23.91 |
| ATOM | 1034 | CA  | ILE | 1620 | 11.532 | 1.046  | 1.474  | 1.00 | 26.01 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1035 | CB  | ILE | 1620 | 12.098 | 1.830  | 0.236  | 1.00 | 22.61 |
| ATOM | 1036 | CG2 | ILE | 1620 | 13.551 | 2.259  | 0.471  | 1.00 | 16.86 |
| ATOM | 1037 | CG1 | ILE | 1620 | 12.014 | 0.977  | -1.026 | 1.00 | 22.72 |
| ATOM | 1038 | CD1 | ILE | 1620 | 12.096 | 1.804  | -2.316 | 1.00 | 23.62 |
| ATOM | 1039 | C   | ILE | 1620 | 11.566 | 1.934  | 2.729  | 1.00 | 26.83 |
| ATOM | 1040 | O   | ILE | 1620 | 10.900 | 2.965  | 2.772  | 1.00 | 28.92 |
| ATOM | 1041 | N   | HIS | 1621 | 12.293 | 1.500  | 3.758  | 1.00 | 26.44 |
| ATOM | 1042 | CA  | HIS | 1621 | 12.386 | 2.245  | 5.007  | 1.00 | 23.61 |
| ATOM | 1043 | CB  | HIS | 1621 | 13.142 | 1.429  | 6.065  | 1.00 | 20.98 |
| ATOM | 1044 | CG  | HIS | 1621 | 12.940 | 1.917  | 7.463  | 1.00 | 21.57 |
| ATOM | 1045 | CD2 | HIS | 1621 | 12.321 | 1.346  | 8.528  | 1.00 | 20.74 |
| ATOM | 1046 | ND1 | HIS | 1621 | 13.382 | 3.151  | 7.897  | 1.00 | 21.08 |
| ATOM | 1047 | CE1 | HIS | 1621 | 13.035 | 3.321  | 9.162  | 1.00 | 21.00 |
| ATOM | 1048 | NE2 | HIS | 1621 | 12.396 | 2.237  | 9.572  | 1.00 | 21.97 |
| ATOM | 1049 | C   | HIS | 1621 | 13.054 | 3.582  | 4.841  | 1.00 | 24.83 |
| ATOM | 1050 | O   | HIS | 1621 | 12.560 | 4.585  | 5.310  | 1.00 | 25.76 |
| ATOM | 1051 | N   | ARG | 1622 | 14.247 | 3.565  | 4.269  | 1.00 | 27.57 |
| ATOM | 1052 | CA  | ARG | 1622 | 15.056 | 4.776  | 4.066  | 1.00 | 26.47 |
| ATOM | 1053 | CB  | ARG | 1622 | 14.233 | 5.918  | 3.460  | 1.00 | 20.08 |
| ATOM | 1054 | CG  | ARG | 1622 | 13.762 | 5.634  | 2.077  | 1.00 | 15.87 |
| ATOM | 1055 | CD  | ARG | 1622 | 12.998 | 6.791  | 1.501  | 0.50 | 11.86 |
| ATOM | 1056 | NE  | ARG | 1622 | 12.613 | 6.458  | 0.144  | 0.50 | 12.46 |
| ATOM | 1057 | CZ  | ARG | 1622 | 11.537 | 5.748  | -0.178 | 0.50 | 11.18 |
| ATOM | 1058 | NH1 | ARG | 1622 | 10.711 | 5.304  | 0.767  | 0.50 | 7.16  |
| ATOM | 1059 | NH2 | ARG | 1622 | 11.340 | 5.398  | -1.442 | 0.50 | 9.57  |
| ATOM | 1060 | C   | ARG | 1622 | 15.813 | 5.250  | 5.325  | 1.00 | 26.18 |
| ATOM | 1061 | O   | ARG | 1622 | 16.645 | 6.150  | 5.250  | 1.00 | 26.90 |
| ATOM | 1062 | N   | ASP | 1623 | 15.544 | 4.650  | 6.480  | 1.00 | 27.26 |
| ATOM | 1063 | CA  | ASP | 1623 | 16.268 | 5.042  | 7.684  | 1.00 | 29.80 |
| ATOM | 1064 | CB  | ASP | 1623 | 15.714 | 6.330  | 8.292  | 1.00 | 32.13 |
| ATOM | 1065 | CG  | ASP | 1623 | 16.690 | 6.940  | 9.298  | 1.00 | 37.87 |
| ATOM | 1066 | OD1 | ASP | 1623 | 16.237 | 7.671  | 10.202 | 1.00 | 42.95 |
| ATOM | 1067 | OD2 | ASP | 1623 | 17.907 | 6.684  | 9.191  | 1.00 | 41.09 |
| ATOM | 1068 | C   | ASP | 1623 | 16.364 | 3.943  | 8.738  | 1.00 | 29.10 |
| ATOM | 1069 | O   | ASP | 1623 | 16.164 | 4.168  | 9.939  | 1.00 | 27.69 |
| ATOM | 1070 | N   | LEU | 1624 | 16.723 | 2.755  | 8.270  | 1.00 | 28.23 |
| ATOM | 1071 | CA  | LEU | 1624 | 16.874 | 1.599  | 9.129  | 1.00 | 26.00 |
| ATOM | 1072 | CB  | LEU | 1624 | 16.944 | 0.351  | 8.245  | 1.00 | 22.14 |
| ATOM | 1073 | CG  | LEU | 1624 | 17.036 | -0.998 | 8.941  | 1.00 | 22.32 |
| ATOM | 1074 | CD1 | LEU | 1624 | 15.853 | -1.196 | 9.932  | 1.00 | 17.01 |
| ATOM | 1075 | CD2 | LEU | 1624 | 17.068 | -2.064 | 7.848  | 1.00 | 20.50 |
| ATOM | 1076 | C   | LEU | 1624 | 18.129 | 1.757  | 10.003 | 1.00 | 25.89 |
| ATOM | 1077 | O   | LEU | 1624 | 19.247 | 1.917  | 9.499  | 1.00 | 26.11 |
| ATOM | 1078 | N   | ALA | 1625 | 17.930 | 1.706  | 11.316 | 1.00 | 25.58 |
| ATOM | 1079 | CA  | ALA | 1625 | 19.006 | 1.864  | 12.292 | 1.00 | 23.16 |
| ATOM | 1080 | CB  | ALA | 1625 | 19.323 | 3.340  | 12.493 | 1.00 | 19.06 |
| ATOM | 1081 | C   | ALA | 1625 | 18.475 | 1.286  | 13.584 | 1.00 | 24.12 |
| ATOM | 1082 | O   | ALA | 1625 | 17.269 | 1.083  | 13.721 | 1.00 | 27.40 |
| ATOM | 1083 | N   | ALA | 1626 | 19.357 | 1.041  | 14.543 | 1.00 | 24.67 |
| ATOM | 1084 | CA  | ALA | 1626 | 18.929 | 0.491  | 15.827 | 1.00 | 25.07 |
| ATOM | 1085 | CB  | ALA | 1626 | 20.148 | 0.145  | 16.691 | 1.00 | 26.06 |
| ATOM | 1086 | C   | ALA | 1626 | 18.015 | 1.474  | 16.560 | 1.00 | 25.13 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1087 | O   | ALA | 1626 | 17.184 | 1.069  | 17.366 | 1.00 | 26.38 |
| ATOM | 1088 | N   | ARG | 1627 | 18.197 | 2.770  | 16.308 | 1.00 | 23.08 |
| ATOM | 1089 | CA  | ARG | 1627 | 17.367 | 3.784  | 16.939 | 1.00 | 24.05 |
| ATOM | 1090 | CB  | ARG | 1627 | 17.850 | 5.187  | 16.565 | 1.00 | 28.05 |
| ATOM | 1091 | CG  | ARG | 1627 | 17.731 | 5.501  | 15.078 | 1.00 | 37.58 |
| ATOM | 1092 | CD  | ARG | 1627 | 18.159 | 6.920  | 14.740 | 1.00 | 42.10 |
| ATOM | 1093 | NE  | ARG | 1627 | 18.448 | 7.085  | 13.310 | 1.00 | 42.67 |
| ATOM | 1094 | CZ  | ARG | 1627 | 19.667 | 7.006  | 12.784 | 1.00 | 43.58 |
| ATOM | 1095 | NH1 | ARG | 1627 | 20.717 | 6.752  | 13.561 | 1.00 | 46.17 |
| ATOM | 1096 | NH2 | ARG | 1627 | 19.841 | 7.201  | 11.492 | 1.00 | 43.78 |
| ATOM | 1097 | C   | ARG | 1627 | 15.926 | 3.632  | 16.482 | 1.00 | 23.04 |
| ATOM | 1098 | O   | ARG | 1627 | 15.015 | 3.979  | 17.216 | 1.00 | 22.27 |
| ATOM | 1099 | N   | ASN | 1628 | 15.722 | 3.093  | 15.286 | 1.00 | 24.49 |
| ATOM | 1100 | CA  | ASN | 1628 | 14.382 | 2.934  | 14.723 | 1.00 | 23.80 |
| ATOM | 1101 | CB  | ASN | 1628 | 14.351 | 3.407  | 13.269 | 1.00 | 27.82 |
| ATOM | 1102 | CG  | ASN | 1628 | 14.503 | 4.918  | 13.143 | 1.00 | 30.25 |
| ATOM | 1103 | OD1 | ASN | 1628 | 13.876 | 5.686  | 13.863 | 1.00 | 32.33 |
| ATOM | 1104 | ND2 | ASN | 1628 | 15.361 | 5.348  | 12.220 | 1.00 | 31.50 |
| ATOM | 1105 | C   | ASN | 1628 | 13.782 | 1.524  | 14.833 | 1.00 | 23.93 |
| ATOM | 1106 | O   | ASN | 1628 | 12.896 | 1.161  | 14.056 | 1.00 | 23.64 |
| ATOM | 1107 | N   | VAL | 1629 | 14.307 | 0.733  | 15.763 | 1.00 | 24.10 |
| ATOM | 1108 | CA  | VAL | 1629 | 13.778 | -0.610 | 16.036 | 1.00 | 22.59 |
| ATOM | 1109 | CB  | VAL | 1629 | 14.829 | -1.727 | 15.823 | 1.00 | 21.16 |
| ATOM | 1110 | CG1 | VAL | 1629 | 14.346 | -3.014 | 16.462 | 1.00 | 17.53 |
| ATOM | 1111 | CG2 | VAL | 1629 | 15.068 | -1.962 | 14.341 | 1.00 | 14.48 |
| ATOM | 1112 | C   | VAL | 1629 | 13.411 | -0.575 | 17.520 | 1.00 | 24.81 |
| ATOM | 1113 | O   | VAL | 1629 | 14.237 | -0.204 | 18.357 | 1.00 | 24.09 |
| ATOM | 1114 | N   | LEU | 1630 | 12.181 | -0.941 | 17.850 | 1.00 | 24.34 |
| ATOM | 1115 | CA  | LEU | 1630 | 11.751 | -0.919 | 19.239 | 1.00 | 26.53 |
| ATOM | 1116 | CB  | LEU | 1630 | 10.447 | -0.129 | 19.359 | 1.00 | 26.19 |
| ATOM | 1117 | CG  | LEU | 1630 | 10.522 | 1.293  | 18.758 | 1.00 | 24.33 |
| ATOM | 1118 | CD1 | LEU | 1630 | 9.149  | 1.870  | 18.601 | 1.00 | 20.51 |
| ATOM | 1119 | CD2 | LEU | 1630 | 11.339 | 2.196  | 19.618 | 1.00 | 19.77 |
| ATOM | 1120 | C   | LEU | 1630 | 11.641 | -2.327 | 19.835 | 1.00 | 28.14 |
| ATOM | 1121 | O   | LEU | 1630 | 11.475 | -3.320 | 19.108 | 1.00 | 28.31 |
| ATOM | 1122 | N   | VAL | 1631 | 11.792 | -2.418 | 21.153 | 1.00 | 28.21 |
| ATOM | 1123 | CA  | VAL | 1631 | 11.741 | -3.694 | 21.866 | 1.00 | 26.96 |
| ATOM | 1124 | CB  | VAL | 1631 | 13.068 | -3.930 | 22.624 | 1.00 | 25.71 |
| ATOM | 1125 | CG1 | VAL | 1631 | 13.113 | -5.345 | 23.222 | 1.00 | 20.40 |
| ATOM | 1126 | CG2 | VAL | 1631 | 14.240 | -3.688 | 21.680 | 1.00 | 19.88 |
| ATOM | 1127 | C   | VAL | 1631 | 10.560 | -3.758 | 22.836 | 1.00 | 29.84 |
| ATOM | 1128 | O   | VAL | 1631 | 10.419 | -2.918 | 23.738 | 1.00 | 32.46 |
| ATOM | 1129 | N   | THR | 1632 | 9.703  | -4.756 | 22.641 | 1.00 | 30.90 |
| ATOM | 1130 | CA  | THR | 1632 | 8.530  | -4.939 | 23.487 | 1.00 | 31.16 |
| ATOM | 1131 | CB  | THR | 1632 | 7.476  | -5.800 | 22.793 | 1.00 | 29.58 |
| ATOM | 1132 | OG1 | THR | 1632 | 7.948  | -7.152 | 22.708 | 1.00 | 29.17 |
| ATOM | 1133 | CG2 | THR | 1632 | 7.186  | -5.262 | 21.414 | 1.00 | 22.23 |
| ATOM | 1134 | C   | THR | 1632 | 8.882  | -5.603 | 24.809 | 1.00 | 32.23 |
| ATOM | 1135 | O   | THR | 1632 | 9.950  | -6.185 | 24.946 | 1.00 | 33.23 |
| ATOM | 1136 | N   | GLU | 1633 | 7.946  | -5.589 | 25.751 | 1.00 | 34.38 |
| ATOM | 1137 | CA  | GLU | 1633 | 8.165  | -6.193 | 27.062 | 1.00 | 35.51 |
| ATOM | 1138 | CB  | GLU | 1633 | 6.881  | -6.114 | 27.899 | 1.00 | 35.48 |



|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1139 | CG  | GLU | 1633 | 7.004  | -6.685  | 29.309 | 1.00 | 45.16 |
| ATOM | 1140 | CD  | GLU | 1633 | 8.070  | -5.999  | 30.183 | 1.00 | 50.45 |
| ATOM | 1141 | OE1 | GLU | 1633 | 8.174  | -4.750  | 30.163 | 1.00 | 52.70 |
| ATOM | 1142 | OE2 | GLU | 1633 | 8.789  | -6.723  | 30.919 | 1.00 | 53.59 |
| ATOM | 1143 | C   | GLU | 1633 | 8.624  | -7.635  | 26.930 | 1.00 | 35.40 |
| ATOM | 1144 | O   | GLU | 1633 | 9.387  | -8.119  | 27.758 | 1.00 | 36.57 |
| ATOM | 1145 | N   | ASP | 1634 | 8.204  | -8.308  | 25.861 | 1.00 | 36.76 |
| ATOM | 1146 | CA  | ASP | 1634 | 8.573  | -9.709  | 25.662 | 1.00 | 37.95 |
| ATOM | 1147 | CB  | ASP | 1634 | 7.435  | -10.491 | 24.991 | 1.00 | 42.90 |
| ATOM | 1148 | CG  | ASP | 1634 | 6.100  | -10.315 | 25.706 | 1.00 | 49.06 |
| ATOM | 1149 | OD1 | ASP | 1634 | 5.885  | -10.957 | 26.759 | 1.00 | 50.95 |
| ATOM | 1150 | OD2 | ASP | 1634 | 5.256  | -9.544  | 25.197 | 1.00 | 53.92 |
| ATOM | 1151 | C   | ASP | 1634 | 9.842  | -9.882  | 24.840 | 1.00 | 36.05 |
| ATOM | 1152 | O   | ASP | 1634 | 10.148 | -10.988 | 24.414 | 1.00 | 34.95 |
| ATOM | 1153 | N   | ASN | 1635 | 10.582 | -8.787  | 24.655 | 1.00 | 36.53 |
| ATOM | 1154 | CA  | ASN | 1635 | 11.833 | -8.763  | 23.868 | 1.00 | 36.21 |
| ATOM | 1155 | CB  | ASN | 1635 | 12.893 | -9.692  | 24.471 | 1.00 | 37.91 |
| ATOM | 1156 | CG  | ASN | 1635 | 13.335 | -9.244  | 25.840 | 1.00 | 37.60 |
| ATOM | 1157 | OD1 | ASN | 1635 | 13.496 | -8.057  | 26.088 | 1.00 | 42.72 |
| ATOM | 1158 | ND2 | ASN | 1635 | 13.525 | -10.191 | 26.743 | 1.00 | 38.03 |
| ATOM | 1159 | C   | ASN | 1635 | 11.641 | -9.073  | 22.372 | 1.00 | 34.59 |
| ATOM | 1160 | O   | ASN | 1635 | 12.431 | -9.799  | 21.754 | 1.00 | 33.52 |
| ATOM | 1161 | N   | VAL | 1636 | 10.557 | -8.541  | 21.819 | 1.00 | 31.95 |
| ATOM | 1162 | CA  | VAL | 1636 | 10.260 | -8.722  | 20.415 | 1.00 | 28.92 |
| ATOM | 1163 | CB  | VAL | 1636 | 8.743  | -8.945  | 20.177 | 1.00 | 31.00 |
| ATOM | 1164 | CG1 | VAL | 1636 | 8.451  | -9.066  | 18.678 | 1.00 | 29.52 |
| ATOM | 1165 | CG2 | VAL | 1636 | 8.289  | -10.220 | 20.884 | 1.00 | 29.03 |
| ATOM | 1166 | C   | VAL | 1636 | 10.725 | -7.461  | 19.721 | 1.00 | 28.05 |
| ATOM | 1167 | O   | VAL | 1636 | 10.432 | -6.355  | 20.179 | 1.00 | 25.21 |
| ATOM | 1168 | N   | MET | 1637 | 11.567 | -7.637  | 18.707 | 1.00 | 28.78 |
| ATOM | 1169 | CA  | MET | 1637 | 12.107 | -6.539  | 17.927 | 1.00 | 27.29 |
| ATOM | 1170 | CB  | MET | 1637 | 13.325 | -7.008  | 17.138 | 1.00 | 27.97 |
| ATOM | 1171 | CG  | MET | 1637 | 14.446 | -7.576  | 17.982 | 1.00 | 29.31 |
| ATOM | 1172 | SD  | MET | 1637 | 15.051 | -6.440  | 19.245 | 1.00 | 29.58 |
| ATOM | 1173 | CE  | MET | 1637 | 15.163 | -7.542  | 20.648 | 1.00 | 23.51 |
| ATOM | 1174 | C   | MET | 1637 | 11.033 | -6.108  | 16.951 | 1.00 | 26.60 |
| ATOM | 1175 | O   | MET | 1637 | 10.479 | -6.951  | 16.244 | 1.00 | 26.60 |
| ATOM | 1176 | N   | LYS | 1638 | 10.758 | -4.805  | 16.893 | 1.00 | 24.35 |
| ATOM | 1177 | CA  | LYS | 1638 | 9.745  | -4.255  | 16.006 | 1.00 | 20.79 |
| ATOM | 1178 | CB  | LYS | 1638 | 8.495  | -3.883  | 16.793 | 1.00 | 18.95 |
| ATOM | 1179 | CG  | LYS | 1638 | 7.723  | -5.087  | 17.268 | 1.00 | 22.82 |
| ATOM | 1180 | CD  | LYS | 1638 | 6.442  | -4.699  | 17.969 | 1.00 | 25.49 |
| ATOM | 1181 | CE  | LYS | 1638 | 5.560  | -5.934  | 18.189 | 1.00 | 24.36 |
| ATOM | 1182 | NZ  | LYS | 1638 | 4.892  | -6.414  | 16.941 | 1.00 | 22.23 |
| ATOM | 1183 | C   | LYS | 1638 | 10.254 | -3.034  | 15.257 | 1.00 | 22.79 |
| ATOM | 1184 | O   | LYS | 1638 | 10.613 | -2.041  | 15.868 | 1.00 | 24.60 |
| ATOM | 1185 | N   | ILE | 1639 | 10.259 | -3.101  | 13.934 | 1.00 | 23.92 |
| ATOM | 1186 | CA  | ILE | 1639 | 10.707 | -1.984  | 13.113 | 1.00 | 24.22 |
| ATOM | 1187 | CB  | ILE | 1639 | 10.925 | -2.439  | 11.648 | 1.00 | 23.18 |
| ATOM | 1188 | CG2 | ILE | 1639 | 11.270 | -1.262  | 10.766 | 1.00 | 17.17 |
| ATOM | 1189 | CG1 | ILE | 1639 | 12.068 | -3.454  | 11.604 | 1.00 | 19.97 |
| ATOM | 1190 | CD1 | ILE | 1639 | 11.975 | -4.369  | 10.461 | 1.00 | 26.92 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1191 | C   | ILE | 1639 | 9.686  | -0.846 | 13.173 | 1.00 | 25.63 |
| ATOM | 1192 | O   | ILE | 1639 | 8.473  | -1.075 | 13.042 | 1.00 | 26.20 |
| ATOM | 1193 | N   | ALA | 1640 | 10.200 | 0.364  | 13.390 | 1.00 | 27.31 |
| ATOM | 1194 | CA  | ALA | 1640 | 9.394  | 1.577  | 13.497 | 1.00 | 27.45 |
| ATOM | 1195 | CB  | ALA | 1640 | 9.623  | 2.211  | 14.862 | 1.00 | 27.20 |
| ATOM | 1196 | C   | ALA | 1640 | 9.720  | 2.595  | 12.411 | 1.00 | 27.87 |
| ATOM | 1197 | O   | ALA | 1640 | 10.765 | 2.522  | 11.755 | 1.00 | 26.95 |
| ATOM | 1198 | N   | ASP | 1641 | 8.815  | 3.551  | 12.237 | 1.00 | 29.66 |
| ATOM | 1199 | CA  | ASP | 1641 | 8.952  | 4.631  | 11.259 | 1.00 | 31.25 |
| ATOM | 1200 | CB  | ASP | 1641 | 10.096 | 5.581  | 11.646 | 1.00 | 33.40 |
| ATOM | 1201 | CG  | ASP | 1641 | 9.713  | 6.551  | 12.771 | 1.00 | 33.86 |
| ATOM | 1202 | OD1 | ASP | 1641 | 10.475 | 7.524  | 12.953 | 1.00 | 37.57 |
| ATOM | 1203 | OD2 | ASP | 1641 | 8.684  | 6.355  | 13.470 | 1.00 | 29.83 |
| ATOM | 1204 | C   | ASP | 1641 | 9.088  | 4.228  | 9.799  | 1.00 | 30.77 |
| ATOM | 1205 | O   | ASP | 1641 | 9.526  | 5.022  | 8.966  | 1.00 | 29.52 |
| ATOM | 1206 | N   | PHE | 1642 | 8.611  | 3.032  | 9.477  | 1.00 | 30.38 |
| ATOM | 1207 | CA  | PHE | 1642 | 8.664  | 2.528  | 8.114  | 1.00 | 29.43 |
| ATOM | 1208 | CB  | PHE | 1642 | 8.459  | 1.009  | 8.100  | 1.00 | 25.46 |
| ATOM | 1209 | CG  | PHE | 1642 | 7.167  | 0.555  | 8.697  | 1.00 | 20.44 |
| ATOM | 1210 | CD1 | PHE | 1642 | 6.002  | 0.547  | 7.942  | 1.00 | 22.76 |
| ATOM | 1211 | CD2 | PHE | 1642 | 7.119  | 0.112  | 10.007 | 1.00 | 18.52 |
| ATOM | 1212 | CE1 | PHE | 1642 | 4.796  | 0.094  | 8.485  | 1.00 | 25.55 |
| ATOM | 1213 | CE2 | PHE | 1642 | 5.926  | -0.341 | 10.559 | 1.00 | 21.76 |
| ATOM | 1214 | CZ  | PHE | 1642 | 4.760  | -0.352 | 9.802  | 1.00 | 24.94 |
| ATOM | 1215 | C   | PHE | 1642 | 7.686  | 3.242  | 7.163  | 1.00 | 31.03 |
| ATOM | 1216 | O   | PHE | 1642 | 7.946  | 3.330  | 5.975  | 1.00 | 35.19 |
| ATOM | 1217 | N   | GLY | 1643 | 6.600  | 3.791  | 7.693  | 1.00 | 30.42 |
| ATOM | 1218 | CA  | GLY | 1643 | 5.640  | 4.476  | 6.845  | 1.00 | 28.27 |
| ATOM | 1219 | C   | GLY | 1643 | 5.736  | 5.991  | 6.874  | 1.00 | 28.46 |
| ATOM | 1220 | O   | GLY | 1643 | 4.896  | 6.707  | 6.332  | 1.00 | 24.29 |
| ATOM | 1221 | N   | LEU | 1644 | 6.816  | 6.471  | 7.458  | 1.00 | 31.65 |
| ATOM | 1222 | CA  | LEU | 1644 | 7.077  | 7.890  | 7.601  | 1.00 | 36.03 |
| ATOM | 1223 | CB  | LEU | 1644 | 8.363  | 8.058  | 8.389  | 1.00 | 32.41 |
| ATOM | 1224 | CG  | LEU | 1644 | 8.321  | 9.137  | 9.446  | 1.00 | 35.30 |
| ATOM | 1225 | CD1 | LEU | 1644 | 7.161  | 8.827  | 10.384 | 1.00 | 37.60 |
| ATOM | 1226 | CD2 | LEU | 1644 | 9.663  | 9.186  | 10.190 | 1.00 | 36.62 |
| ATOM | 1227 | C   | LEU | 1644 | 7.178  | 8.708  | 6.293  | 1.00 | 40.21 |
| ATOM | 1228 | O   | LEU | 1644 | 7.770  | 8.267  | 5.312  | 1.00 | 40.65 |
| ATOM | 1229 | N   | ALA | 1645 | 6.553  | 9.881  | 6.293  | 1.00 | 44.50 |
| ATOM | 1230 | CA  | ALA | 1645 | 6.591  | 10.786 | 5.148  | 1.00 | 48.66 |
| ATOM | 1231 | CB  | ALA | 1645 | 5.432  | 11.762 | 5.241  | 1.00 | 45.63 |
| ATOM | 1232 | C   | ALA | 1645 | 7.935  | 11.545 | 5.173  | 1.00 | 51.32 |
| ATOM | 1233 | O   | ALA | 1645 | 8.254  | 12.200 | 6.163  | 1.00 | 52.68 |
| ATOM | 1234 | N   | ALA | 1646 | 8.727  | 11.444 | 4.107  | 1.00 | 52.77 |
| ATOM | 1235 | CA  | ALA | 1646 | 10.023 | 12.121 | 4.077  | 1.00 | 54.73 |
| ATOM | 1236 | CB  | ALA | 1646 | 11.108 | 11.194 | 4.646  | 1.00 | 55.34 |
| ATOM | 1237 | C   | ALA | 1646 | 10.446 | 12.601 | 2.692  | 1.00 | 56.41 |
| ATOM | 1238 | O   | ALA | 1646 | 10.430 | 11.823 | 1.740  | 1.00 | 57.76 |
| ATOM | 1239 | N   | ASP | 1647 | 10.811 | 13.876 | 2.567  | 1.00 | 58.20 |
| ATOM | 1240 | CA  | ASP | 1647 | 11.280 | 14.394 | 1.283  | 1.00 | 59.39 |
| ATOM | 1241 | CB  | ASP | 1647 | 10.898 | 15.861 | 1.083  | 1.00 | 59.29 |
| ATOM | 1242 | CG  | ASP | 1647 | 11.128 | 16.339 | -0.356 | 1.00 | 60.67 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1243 | OD1 | ASP | 1647 | 12.110 | 15.908 | -1.009 | 1.00 | 61.21 |
| ATOM | 1244 | OD2 | ASP | 1647 | 10.337 | 17.173 | -0.835 | 1.00 | 61.34 |
| ATOM | 1245 | C   | ASP | 1647 | 12.793 | 14.236 | 1.273  | 1.00 | 60.16 |
| ATOM | 1246 | O   | ASP | 1647 | 13.523 | 15.023 | 1.889  | 1.00 | 58.16 |
| ATOM | 1247 | N   | ILE | 1648 | 13.248 | 13.209 | 0.562  | 1.00 | 61.28 |
| ATOM | 1248 | CA  | ILE | 1648 | 14.658 | 12.878 | 0.439  | 1.00 | 62.12 |
| ATOM | 1249 | CB  | ILE | 1648 | 14.848 | 11.626 | -0.444 | 1.00 | 59.97 |
| ATOM | 1250 | CG2 | ILE | 1648 | 14.023 | 10.469 | 0.131  | 1.00 | 58.26 |
| ATOM | 1251 | CG1 | ILE | 1648 | 14.429 | 11.922 | -1.883 | 1.00 | 55.69 |
| ATOM | 1252 | CD1 | ILE | 1648 | 15.005 | 10.976 | -2.890 | 1.00 | 54.38 |
| ATOM | 1253 | C   | ILE | 1648 | 15.470 | 14.047 | -0.127 | 1.00 | 65.02 |
| ATOM | 1254 | O   | ILE | 1648 | 16.633 | 14.245 | 0.233  | 1.00 | 66.85 |
| ATOM | 1255 | N   | HIS | 1649 | 14.844 | 14.839 | -0.995 | 1.00 | 65.85 |
| ATOM | 1256 | CA  | HIS | 1649 | 15.505 | 15.992 | -1.589 | 1.00 | 66.73 |
| ATOM | 1257 | CB  | HIS | 1649 | 14.859 | 16.358 | -2.934 | 1.00 | 65.67 |
| ATOM | 1258 | CG  | HIS | 1649 | 15.142 | 15.388 | -4.038 | 1.00 | 66.47 |
| ATOM | 1259 | CD2 | HIS | 1649 | 16.253 | 14.686 | -4.355 | 1.00 | 67.11 |
| ATOM | 1260 | ND1 | HIS | 1649 | 14.210 | 15.064 | -4.999 | 1.00 | 65.21 |
| ATOM | 1261 | CE1 | HIS | 1649 | 14.733 | 14.216 | -5.867 | 1.00 | 66.52 |
| ATOM | 1262 | NE2 | HIS | 1649 | 15.974 | 13.966 | -5.494 | 1.00 | 66.25 |
| ATOM | 1263 | C   | HIS | 1649 | 15.505 | 17.200 | -0.663 | 1.00 | 68.55 |
| ATOM | 1264 | O   | HIS | 1649 | 15.636 | 18.341 | -1.116 | 1.00 | 69.35 |
| ATOM | 1265 | N   | HIS | 1650 | 15.273 | 16.963 | 0.629  | 1.00 | 71.25 |
| ATOM | 1266 | CA  | HIS | 1650 | 15.262 | 18.026 | 1.633  | 1.00 | 73.53 |
| ATOM | 1267 | CB  | HIS | 1650 | 13.849 | 18.551 | 1.860  | 1.00 | 76.79 |
| ATOM | 1268 | CG  | HIS | 1650 | 13.342 | 19.448 | 0.765  | 1.00 | 83.36 |
| ATOM | 1269 | CD2 | HIS | 1650 | 13.509 | 20.772 | 0.537  | 1.00 | 86.47 |
| ATOM | 1270 | ND1 | HIS | 1650 | 12.571 | 18.984 | -0.270 | 1.00 | 87.02 |
| ATOM | 1271 | CE1 | HIS | 1650 | 12.279 | 19.983 | -1.076 | 1.00 | 88.66 |
| ATOM | 1272 | NE2 | HIS | 1650 | 12.840 | 21.080 | -0.609 | 1.00 | 88.34 |
| ATOM | 1273 | C   | HIS | 1650 | 15.872 | 17.580 | 2.965  | 1.00 | 73.11 |
| ATOM | 1274 | O   | HIS | 1650 | 15.686 | 18.241 | 3.977  | 1.00 | 73.23 |
| ATOM | 1275 | N   | ILE | 1651 | 16.599 | 16.464 | 2.949  | 1.00 | 72.64 |
| ATOM | 1276 | CA  | ILE | 1651 | 17.234 | 15.937 | 4.143  | 1.00 | 72.54 |
| ATOM | 1277 | CB  | ILE | 1651 | 17.660 | 14.472 | 3.942  | 1.00 | 74.59 |
| ATOM | 1278 | CG2 | ILE | 1651 | 18.463 | 13.966 | 5.142  | 1.00 | 75.52 |
| ATOM | 1279 | CG1 | ILE | 1651 | 16.426 | 13.591 | 3.752  | 1.00 | 77.59 |
| ATOM | 1280 | CD1 | ILE | 1651 | 16.747 | 12.141 | 3.472  | 1.00 | 80.12 |
| ATOM | 1281 | C   | ILE | 1651 | 18.463 | 16.769 | 4.523  | 1.00 | 71.47 |
| ATOM | 1282 | O   | ILE | 1651 | 19.326 | 17.022 | 3.688  | 1.00 | 72.40 |
| ATOM | 1283 | N   | ASP | 1652 | 18.529 | 17.197 | 5.784  | 1.00 | 70.34 |
| ATOM | 1284 | CA  | ASP | 1652 | 19.678 | 17.976 | 6.235  | 1.00 | 68.57 |
| ATOM | 1285 | CB  | ASP | 1652 | 19.272 | 18.878 | 7.411  | 1.00 | 72.80 |
| ATOM | 1286 | CG  | ASP | 1652 | 20.456 | 19.640 | 7.982  | 1.00 | 76.90 |
| ATOM | 1287 | OD1 | ASP | 1652 | 21.463 | 19.888 | 7.287  | 1.00 | 79.62 |
| ATOM | 1288 | OD2 | ASP | 1652 | 20.369 | 20.030 | 9.170  | 1.00 | 80.36 |
| ATOM | 1289 | C   | ASP | 1652 | 20.771 | 17.007 | 6.652  | 1.00 | 66.01 |
| ATOM | 1290 | O   | ASP | 1652 | 20.709 | 16.421 | 7.735  | 1.00 | 64.75 |
| ATOM | 1291 | N   | TYR | 1653 | 21.778 | 16.868 | 5.808  | 1.00 | 64.05 |
| ATOM | 1292 | CA  | TYR | 1653 | 22.906 | 15.978 | 6.074  | 1.00 | 63.55 |
| ATOM | 1293 | CB  | TYR | 1653 | 23.829 | 15.913 | 4.855  | 1.00 | 63.81 |
| ATOM | 1294 | CG  | TYR | 1653 | 23.316 | 14.993 | 3.771  | 1.00 | 65.65 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1295 | CD1 | TYR | 1653 | 24.082 | 14.710 | 2.643  | 1.00 | 65.32 |
| ATOM | 1296 | CE1 | TYR | 1653 | 23.638 | 13.810 | 1.674  | 1.00 | 68.40 |
| ATOM | 1297 | CD2 | TYR | 1653 | 22.079 | 14.357 | 3.903  | 1.00 | 66.72 |
| ATOM | 1298 | CE2 | TYR | 1653 | 21.626 | 13.451 | 2.940  | 1.00 | 69.93 |
| ATOM | 1299 | CZ  | TYR | 1653 | 22.409 | 13.182 | 1.833  | 1.00 | 70.13 |
| ATOM | 1300 | OH  | TYR | 1653 | 21.966 | 12.272 | 0.902  | 1.00 | 72.73 |
| ATOM | 1301 | C   | TYR | 1653 | 23.708 | 16.334 | 7.328  | 1.00 | 62.96 |
| ATOM | 1302 | O   | TYR | 1653 | 24.342 | 15.473 | 7.938  | 1.00 | 63.31 |
| ATOM | 1303 | N   | TYR | 1654 | 23.653 | 17.598 | 7.727  | 1.00 | 63.02 |
| ATOM | 1304 | CA  | TYR | 1654 | 24.379 | 18.065 | 8.902  | 1.00 | 63.89 |
| ATOM | 1305 | CB  | TYR | 1654 | 24.896 | 19.491 | 8.684  | 1.00 | 60.37 |
| ATOM | 1306 | CG  | TYR | 1654 | 26.012 | 19.565 | 7.669  | 1.00 | 59.33 |
| ATOM | 1307 | CD1 | TYR | 1654 | 25.735 | 19.673 | 6.313  | 1.00 | 59.29 |
| ATOM | 1308 | CE1 | TYR | 1654 | 26.759 | 19.687 | 5.362  | 1.00 | 61.50 |
| ATOM | 1309 | CD2 | TYR | 1654 | 27.349 | 19.480 | 8.061  | 1.00 | 60.05 |
| ATOM | 1310 | CE2 | TYR | 1654 | 28.384 | 19.498 | 7.119  | 1.00 | 61.35 |
| ATOM | 1311 | CZ  | TYR | 1654 | 28.082 | 19.598 | 5.773  | 1.00 | 62.41 |
| ATOM | 1312 | OH  | TYR | 1654 | 29.098 | 19.589 | 4.842  | 1.00 | 60.57 |
| ATOM | 1313 | C   | TYR | 1654 | 23.586 | 17.984 | 10.192 | 1.00 | 65.65 |
| ATOM | 1314 | O   | TYR | 1654 | 24.104 | 18.321 | 11.252 | 1.00 | 67.31 |
| ATOM | 1315 | N   | LYS | 1655 | 22.349 | 17.504 | 10.118 | 1.00 | 67.52 |
| ATOM | 1316 | CA  | LYS | 1655 | 21.499 | 17.390 | 11.303 | 1.00 | 69.54 |
| ATOM | 1317 | CB  | LYS | 1655 | 20.028 | 17.445 | 10.893 | 1.00 | 71.09 |
| ATOM | 1318 | CG  | LYS | 1655 | 19.057 | 17.518 | 12.049 | 1.00 | 73.08 |
| ATOM | 1319 | CD  | LYS | 1655 | 17.648 | 17.713 | 11.531 | 1.00 | 76.73 |
| ATOM | 1320 | CE  | LYS | 1655 | 16.624 | 17.320 | 12.568 | 1.00 | 81.94 |
| ATOM | 1321 | NZ  | LYS | 1655 | 15.232 | 17.521 | 12.072 | 1.00 | 84.53 |
| ATOM | 1322 | C   | LYS | 1655 | 21.783 | 16.102 | 12.076 | 1.00 | 70.33 |
| ATOM | 1323 | O   | LYS | 1655 | 21.952 | 15.032 | 11.478 | 1.00 | 70.43 |
| ATOM | 1324 | N   | LYS | 1656 | 21.825 | 16.218 | 13.403 | 1.00 | 70.11 |
| ATOM | 1325 | CA  | LYS | 1656 | 22.093 | 15.079 | 14.274 | 1.00 | 70.03 |
| ATOM | 1326 | CB  | LYS | 1656 | 23.049 | 15.481 | 15.394 | 1.00 | 67.72 |
| ATOM | 1327 | CG  | LYS | 1656 | 24.473 | 15.716 | 14.947 | 1.00 | 66.34 |
| ATOM | 1328 | CD  | LYS | 1656 | 25.326 | 16.124 | 16.136 | 1.00 | 66.60 |
| ATOM | 1329 | CE  | LYS | 1656 | 26.801 | 15.839 | 15.905 | 1.00 | 64.71 |
| ATOM | 1330 | NZ  | LYS | 1656 | 27.612 | 16.059 | 17.138 | 1.00 | 62.24 |
| ATOM | 1331 | C   | LYS | 1656 | 20.823 | 14.480 | 14.881 | 1.00 | 70.67 |
| ATOM | 1332 | O   | LYS | 1656 | 19.759 | 15.104 | 14.864 | 1.00 | 71.91 |
| ATOM | 1333 | N   | THR | 1657 | 20.941 | 13.265 | 15.412 | 1.00 | 69.38 |
| ATOM | 1334 | CA  | THR | 1657 | 19.818 | 12.586 | 16.035 | 1.00 | 68.30 |
| ATOM | 1335 | CB  | THR | 1657 | 20.052 | 11.051 | 16.101 | 1.00 | 69.30 |
| ATOM | 1336 | OG1 | THR | 1657 | 21.179 | 10.757 | 16.941 | 1.00 | 68.20 |
| ATOM | 1337 | CG2 | THR | 1657 | 20.310 | 10.479 | 14.713 | 1.00 | 69.71 |
| ATOM | 1338 | C   | THR | 1657 | 19.706 | 13.145 | 17.445 | 1.00 | 67.60 |
| ATOM | 1339 | O   | THR | 1657 | 20.521 | 13.971 | 17.846 | 1.00 | 67.40 |
| ATOM | 1340 | N   | ALA | 1658 | 18.715 | 12.694 | 18.206 | 1.00 | 67.83 |
| ATOM | 1341 | CA  | ALA | 1658 | 18.564 | 13.163 | 19.582 | 1.00 | 67.73 |
| ATOM | 1342 | CB  | ALA | 1658 | 17.345 | 12.503 | 20.234 | 1.00 | 68.87 |
| ATOM | 1343 | C   | ALA | 1658 | 19.833 | 12.820 | 20.364 | 1.00 | 66.59 |
| ATOM | 1344 | O   | ALA | 1658 | 20.368 | 13.640 | 21.115 | 1.00 | 66.33 |
| ATOM | 1345 | N   | ASN | 1659 | 20.343 | 11.616 | 20.129 | 1.00 | 65.38 |
| ATOM | 1346 | CA  | ASN | 1659 | 21.545 | 11.143 | 20.801 | 1.00 | 62.65 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1347 | CB  | ASN | 1659 | 21.702 | 9.638  | 20.616 | 1.00 | 63.61 |
| ATOM | 1348 | CG  | ASN | 1659 | 22.548 | 9.009  | 21.697 | 1.00 | 64.09 |
| ATOM | 1349 | OD1 | ASN | 1659 | 22.526 | 9.451  | 22.850 | 1.00 | 63.69 |
| ATOM | 1350 | ND2 | ASN | 1659 | 23.279 | 7.959  | 21.345 | 1.00 | 64.10 |
| ATOM | 1351 | C   | ASN | 1659 | 22.808 | 11.844 | 20.321 | 1.00 | 60.46 |
| ATOM | 1352 | O   | ASN | 1659 | 23.882 | 11.601 | 20.856 | 1.00 | 60.78 |
| ATOM | 1353 | N   | GLY | 1660 | 22.671 | 12.675 | 19.285 | 1.00 | 58.84 |
| ATOM | 1354 | CA  | GLY | 1660 | 23.803 | 13.407 | 18.735 | 1.00 | 56.69 |
| ATOM | 1355 | C   | GLY | 1660 | 24.570 | 12.721 | 17.616 | 1.00 | 56.40 |
| ATOM | 1356 | O   | GLY | 1660 | 25.738 | 13.028 | 17.377 | 1.00 | 56.43 |
| ATOM | 1357 | N   | ARG | 1661 | 23.929 | 11.779 | 16.937 | 1.00 | 56.00 |
| ATOM | 1358 | CA  | ARG | 1661 | 24.585 | 11.048 | 15.849 | 1.00 | 53.80 |
| ATOM | 1359 | CB  | ARG | 1661 | 24.312 | 9.540  | 15.952 | 1.00 | 54.52 |
| ATOM | 1360 | CG  | ARG | 1661 | 24.876 | 8.879  | 17.218 | 1.00 | 55.28 |
| ATOM | 1361 | CD  | ARG | 1661 | 24.556 | 7.395  | 17.226 | 1.00 | 58.01 |
| ATOM | 1362 | NE  | ARG | 1661 | 25.051 | 6.670  | 18.396 | 1.00 | 58.41 |
| ATOM | 1363 | CZ  | ARG | 1661 | 24.918 | 5.355  | 18.559 | 1.00 | 59.08 |
| ATOM | 1364 | NH1 | ARG | 1661 | 24.306 | 4.637  | 17.623 | 1.00 | 55.82 |
| ATOM | 1365 | NH2 | ARG | 1661 | 25.394 | 4.762  | 19.652 | 1.00 | 57.53 |
| ATOM | 1366 | C   | ARG | 1661 | 24.139 | 11.581 | 14.491 | 1.00 | 51.03 |
| ATOM | 1367 | O   | ARG | 1661 | 23.160 | 12.323 | 14.401 | 1.00 | 48.69 |
| ATOM | 1368 | N   | LEU | 1662 | 24.859 | 11.189 | 13.440 | 1.00 | 48.33 |
| ATOM | 1369 | CA  | LEU | 1662 | 24.565 | 11.647 | 12.087 | 1.00 | 45.87 |
| ATOM | 1370 | CB  | LEU | 1662 | 25.839 | 12.199 | 11.426 | 1.00 | 46.18 |
| ATOM | 1371 | CG  | LEU | 1662 | 26.374 | 13.511 | 12.016 | 1.00 | 45.78 |
| ATOM | 1372 | CD1 | LEU | 1662 | 27.856 | 13.681 | 11.722 | 1.00 | 45.92 |
| ATOM | 1373 | CD2 | LEU | 1662 | 25.576 | 14.698 | 11.489 | 1.00 | 44.92 |
| ATOM | 1374 | C   | LEU | 1662 | 23.961 | 10.542 | 11.230 | 1.00 | 43.02 |
| ATOM | 1375 | O   | LEU | 1662 | 24.647 | 9.607  | 10.811 | 1.00 | 42.04 |
| ATOM | 1376 | N   | PRO | 1663 | 22.648 | 10.640 | 10.968 | 1.00 | 41.48 |
| ATOM | 1377 | CD  | PRO | 1663 | 21.769 | 11.718 | 11.468 | 1.00 | 40.54 |
| ATOM | 1378 | CA  | PRO | 1663 | 21.886 | 9.680  | 10.161 | 1.00 | 39.60 |
| ATOM | 1379 | CB  | PRO | 1663 | 20.582 | 10.424 | 9.889  | 1.00 | 38.77 |
| ATOM | 1380 | CG  | PRO | 1663 | 20.386 | 11.183 | 11.151 | 1.00 | 40.83 |
| ATOM | 1381 | C   | PRO | 1663 | 22.578 | 9.273  | 8.860  | 1.00 | 35.90 |
| ATOM | 1382 | O   | PRO | 1663 | 22.448 | 8.124  | 8.427  | 1.00 | 36.85 |
| ATOM | 1383 | N   | VAL | 1664 | 23.356 | 10.180 | 8.276  | 1.00 | 33.16 |
| ATOM | 1384 | CA  | VAL | 1664 | 24.053 | 9.880  | 7.024  | 1.00 | 32.51 |
| ATOM | 1385 | CB  | VAL | 1664 | 24.851 | 11.106 | 6.439  | 1.00 | 32.44 |
| ATOM | 1386 | CG1 | VAL | 1664 | 23.917 | 12.213 | 6.065  | 1.00 | 26.99 |
| ATOM | 1387 | CG2 | VAL | 1664 | 25.897 | 11.607 | 7.421  | 1.00 | 29.84 |
| ATOM | 1388 | C   | VAL | 1664 | 24.989 | 8.675  | 7.158  | 1.00 | 30.30 |
| ATOM | 1389 | O   | VAL | 1664 | 25.400 | 8.091  | 6.161  | 1.00 | 30.16 |
| ATOM | 1390 | N   | LYS | 1665 | 25.278 | 8.276  | 8.393  | 1.00 | 27.72 |
| ATOM | 1391 | CA  | LYS | 1665 | 26.170 | 7.151  | 8.649  | 1.00 | 27.96 |
| ATOM | 1392 | CB  | LYS | 1665 | 26.808 | 7.276  | 10.025 | 1.00 | 26.42 |
| ATOM | 1393 | CG  | LYS | 1665 | 27.857 | 8.351  | 10.061 | 1.00 | 28.20 |
| ATOM | 1394 | CD  | LYS | 1665 | 28.221 | 8.754  | 11.478 | 1.00 | 32.47 |
| ATOM | 1395 | CE  | LYS | 1665 | 29.398 | 9.720  | 11.468 | 1.00 | 32.33 |
| ATOM | 1396 | NZ  | LYS | 1665 | 29.713 | 10.231 | 12.819 | 1.00 | 30.38 |
| ATOM | 1397 | C   | LYS | 1665 | 25.522 | 5.794  | 8.486  | 1.00 | 25.81 |
| ATOM | 1398 | O   | LYS | 1665 | 26.159 | 4.769  | 8.691  | 1.00 | 27.53 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1399 | N   | TRP | 1666 | 24.247 | 5.793  | 8.120  | 1.00 | 26.13 |
| ATOM | 1400 | CA  | TRP | 1666 | 23.499 | 4.554  | 7.896  | 1.00 | 25.88 |
| ATOM | 1401 | CB  | TRP | 1666 | 22.259 | 4.537  | 8.800  | 1.00 | 26.15 |
| ATOM | 1402 | CG  | TRP | 1666 | 22.547 | 4.067  | 10.226 | 1.00 | 28.12 |
| ATOM | 1403 | CD2 | TRP | 1666 | 23.020 | 4.864  | 11.324 | 1.00 | 26.14 |
| ATOM | 1404 | CE2 | TRP | 1666 | 23.154 | 4.009  | 12.438 | 1.00 | 24.97 |
| ATOM | 1405 | CE3 | TRP | 1666 | 23.349 | 6.225  | 11.475 | 1.00 | 25.14 |
| ATOM | 1406 | CD1 | TRP | 1666 | 22.408 | 2.795  | 10.715 | 1.00 | 26.09 |
| ATOM | 1407 | NE1 | TRP | 1666 | 22.777 | 2.751  | 12.034 | 1.00 | 22.55 |
| ATOM | 1408 | CZ2 | TRP | 1666 | 23.606 | 4.453  | 13.684 | 1.00 | 25.32 |
| ATOM | 1409 | CZ3 | TRP | 1666 | 23.795 | 6.664  | 12.712 | 1.00 | 21.72 |
| ATOM | 1410 | CH2 | TRP | 1666 | 23.920 | 5.782  | 13.798 | 1.00 | 23.77 |
| ATOM | 1411 | C   | TRP | 1666 | 23.092 | 4.444  | 6.425  | 1.00 | 24.79 |
| ATOM | 1412 | O   | TRP | 1666 | 22.662 | 3.390  | 5.971  | 1.00 | 25.26 |
| ATOM | 1413 | N   | MET | 1667 | 23.350 | 5.508  | 5.664  | 1.00 | 24.21 |
| ATOM | 1414 | CA  | MET | 1667 | 22.963 | 5.568  | 4.252  | 1.00 | 23.79 |
| ATOM | 1415 | CB  | MET | 1667 | 22.796 | 7.018  | 3.809  | 1.00 | 25.08 |
| ATOM | 1416 | CG  | MET | 1667 | 21.793 | 7.813  | 4.564  | 1.00 | 32.58 |
| ATOM | 1417 | SD  | MET | 1667 | 21.778 | 9.495  | 3.910  | 1.00 | 41.43 |
| ATOM | 1418 | CE  | MET | 1667 | 21.011 | 9.209  | 2.387  | 1.00 | 40.85 |
| ATOM | 1419 | C   | MET | 1667 | 23.938 | 4.942  | 3.279  | 1.00 | 22.52 |
| ATOM | 1420 | O   | MET | 1667 | 25.139 | 5.173  | 3.362  | 1.00 | 23.63 |
| ATOM | 1421 | N   | ALA | 1668 | 23.406 | 4.195  | 2.324  | 1.00 | 22.77 |
| ATOM | 1422 | CA  | ALA | 1668 | 24.218 | 3.576  | 1.278  | 1.00 | 24.91 |
| ATOM | 1423 | CB  | ALA | 1668 | 23.342 | 2.672  | 0.396  | 1.00 | 24.41 |
| ATOM | 1424 | C   | ALA | 1668 | 24.800 | 4.706  | 0.438  | 1.00 | 26.66 |
| ATOM | 1425 | O   | ALA | 1668 | 24.163 | 5.748  | 0.251  | 1.00 | 24.54 |
| ATOM | 1426 | N   | PRO | 1669 | 26.011 | 4.511  | -0.101 | 1.00 | 26.97 |
| ATOM | 1427 | CD  | PRO | 1669 | 26.935 | 3.374  | 0.066  | 1.00 | 26.23 |
| ATOM | 1428 | CA  | PRO | 1669 | 26.614 | 5.563  | -0.919 | 1.00 | 26.05 |
| ATOM | 1429 | CB  | PRO | 1669 | 27.855 | 4.876  | -1.482 | 1.00 | 24.03 |
| ATOM | 1430 | CG  | PRO | 1669 | 28.259 | 3.946  | -0.358 | 1.00 | 26.27 |
| ATOM | 1431 | C   | PRO | 1669 | 25.687 | 6.048  | -2.030 | 1.00 | 26.44 |
| ATOM | 1432 | O   | PRO | 1669 | 25.576 | 7.250  | -2.263 | 1.00 | 27.72 |
| ATOM | 1433 | N   | GLU | 1670 | 24.971 | 5.137  | -2.685 | 1.00 | 27.16 |
| ATOM | 1434 | CA  | GLU | 1670 | 24.093 | 5.553  | -3.769 | 1.00 | 27.63 |
| ATOM | 1435 | CB  | GLU | 1670 | 23.613 | 4.365  | -4.614 | 1.00 | 29.35 |
| ATOM | 1436 | CG  | GLU | 1670 | 22.545 | 3.492  | -3.980 | 1.00 | 29.16 |
| ATOM | 1437 | CD  | GLU | 1670 | 23.089 | 2.238  | -3.310 | 1.00 | 28.03 |
| ATOM | 1438 | OE1 | GLU | 1670 | 22.248 | 1.430  | -2.874 | 1.00 | 24.12 |
| ATOM | 1439 | OE2 | GLU | 1670 | 24.325 | 2.040  | -3.215 | 1.00 | 26.07 |
| ATOM | 1440 | C   | GLU | 1670 | 22.931 | 6.407  | -3.301 | 1.00 | 25.52 |
| ATOM | 1441 | O   | GLU | 1670 | 22.477 | 7.281  | -4.042 | 1.00 | 24.12 |
| ATOM | 1442 | N   | ALA | 1671 | 22.452 | 6.163  | -2.084 | 1.00 | 27.74 |
| ATOM | 1443 | CA  | ALA | 1671 | 21.337 | 6.928  | -1.510 | 1.00 | 27.65 |
| ATOM | 1444 | CB  | ALA | 1671 | 20.729 | 6.189  | -0.319 | 1.00 | 23.18 |
| ATOM | 1445 | C   | ALA | 1671 | 21.860 | 8.283  | -1.065 | 1.00 | 28.22 |
| ATOM | 1446 | O   | ALA | 1671 | 21.234 | 9.310  | -1.305 | 1.00 | 28.51 |
| ATOM | 1447 | N   | LEU | 1672 | 23.011 | 8.266  | -0.406 | 1.00 | 30.60 |
| ATOM | 1448 | CA  | LEU | 1672 | 23.647 | 9.484  | 0.074  | 1.00 | 32.67 |
| ATOM | 1449 | CB  | LEU | 1672 | 24.831 | 9.127  | 0.952  | 1.00 | 32.05 |
| ATOM | 1450 | CG  | LEU | 1672 | 25.662 | 10.264 | 1.527  | 1.00 | 34.00 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1451 | CD1 | LEU | 1672 | 24.874 | 10.981 | 2.577  | 1.00 | 38.85 |
| ATOM | 1452 | CD2 | LEU | 1672 | 26.910 | 9.667  | 2.149  | 1.00 | 35.22 |
| ATOM | 1453 | C   | LEU | 1672 | 24.121 | 10.398 | -1.067 | 1.00 | 37.10 |
| ATOM | 1454 | O   | LEU | 1672 | 23.799 | 11.580 | -1.086 | 1.00 | 37.19 |
| ATOM | 1455 | N   | PHE | 1673 | 24.905 | 9.858  | -1.997 | 1.00 | 37.60 |
| ATOM | 1456 | CA  | PHE | 1673 | 25.403 | 10.664 | -3.102 | 1.00 | 37.11 |
| ATOM | 1457 | CB  | PHE | 1673 | 26.692 | 10.061 | -3.667 | 1.00 | 35.24 |
| ATOM | 1458 | CG  | PHE | 1673 | 27.782 | 9.857  | -2.644 | 1.00 | 33.54 |
| ATOM | 1459 | CD1 | PHE | 1673 | 28.456 | 8.633  | -2.566 | 1.00 | 31.54 |
| ATOM | 1460 | CD2 | PHE | 1673 | 28.143 | 10.874 | -1.762 | 1.00 | 33.10 |
| ATOM | 1461 | CE1 | PHE | 1673 | 29.467 | 8.421  | -1.623 | 1.00 | 34.66 |
| ATOM | 1462 | CE2 | PHE | 1673 | 29.156 | 10.678 | -0.816 | 1.00 | 35.41 |
| ATOM | 1463 | CZ  | PHE | 1673 | 29.819 | 9.444  | -0.748 | 1.00 | 34.81 |
| ATOM | 1464 | C   | PHE | 1673 | 24.406 | 10.890 | -4.245 | 1.00 | 39.03 |
| ATOM | 1465 | O   | PHE | 1673 | 24.276 | 11.997 | -4.734 | 1.00 | 39.02 |
| ATOM | 1466 | N   | ASP | 1674 | 23.693 | 9.844  | -4.651 | 1.00 | 42.35 |
| ATOM | 1467 | CA  | ASP | 1674 | 22.757 | 9.931  | -5.762 | 1.00 | 41.59 |
| ATOM | 1468 | CB  | ASP | 1674 | 22.957 | 8.736  | -6.700 | 1.00 | 46.08 |
| ATOM | 1469 | CG  | ASP | 1674 | 24.384 | 8.617  | -7.201 | 1.00 | 51.20 |
| ATOM | 1470 | OD1 | ASP | 1674 | 25.057 | 9.663  | -7.333 | 1.00 | 53.97 |
| ATOM | 1471 | OD2 | ASP | 1674 | 24.822 | 7.470  | -7.469 | 1.00 | 50.65 |
| ATOM | 1472 | C   | ASP | 1674 | 21.263 | 9.999  | -5.418 | 1.00 | 42.89 |
| ATOM | 1473 | O   | ASP | 1674 | 20.427 | 10.079 | -6.317 | 1.00 | 41.95 |
| ATOM | 1474 | N   | ARG | 1675 | 20.923 | 9.899  | -4.134 | 1.00 | 42.82 |
| ATOM | 1475 | CA  | ARG | 1675 | 19.521 | 9.944  | -3.706 | 1.00 | 42.64 |
| ATOM | 1476 | CB  | ARG | 1675 | 18.890 | 11.300 | -4.028 | 1.00 | 48.80 |
| ATOM | 1477 | CG  | ARG | 1675 | 19.480 | 12.449 | -3.252 | 1.00 | 61.19 |
| ATOM | 1478 | CD  | ARG | 1675 | 19.407 | 13.727 | -4.068 | 1.00 | 72.90 |
| ATOM | 1479 | NE  | ARG | 1675 | 20.025 | 14.854 | -3.381 | 1.00 | 83.15 |
| ATOM | 1480 | CZ  | ARG | 1675 | 19.652 | 16.123 | -3.539 | 1.00 | 88.21 |
| ATOM | 1481 | NH1 | ARG | 1675 | 18.662 | 16.439 | -4.365 | 1.00 | 89.58 |
| ATOM | 1482 | NH2 | ARG | 1675 | 20.265 | 17.085 | -2.860 | 1.00 | 92.07 |
| ATOM | 1483 | C   | ARG | 1675 | 18.674 | 8.825  | -4.299 | 1.00 | 38.05 |
| ATOM | 1484 | O   | ARG | 1675 | 17.495 | 9.005  | -4.588 | 1.00 | 38.87 |
| ATOM | 1485 | N   | ILE | 1676 | 19.281 | 7.658  | -4.479 | 1.00 | 34.44 |
| ATOM | 1486 | CA  | ILE | 1676 | 18.576 | 6.514  | -5.012 | 1.00 | 30.11 |
| ATOM | 1487 | CB  | ILE | 1676 | 19.378 | 5.825  | -6.096 | 1.00 | 29.58 |
| ATOM | 1488 | CG2 | ILE | 1676 | 18.509 | 4.850  | -6.797 | 1.00 | 30.72 |
| ATOM | 1489 | CG1 | ILE | 1676 | 19.835 | 6.868  | -7.116 | 1.00 | 34.29 |
| ATOM | 1490 | CD1 | ILE | 1676 | 20.798 | 6.348  | -8.145 | 1.00 | 41.15 |
| ATOM | 1491 | C   | ILE | 1676 | 18.315 | 5.541  | -3.874 | 1.00 | 26.90 |
| ATOM | 1492 | O   | ILE | 1676 | 19.236 | 4.898  | -3.364 | 1.00 | 22.06 |
| ATOM | 1493 | N   | TYR | 1677 | 17.056 | 5.465  | -3.454 | 1.00 | 28.17 |
| ATOM | 1494 | CA  | TYR | 1677 | 16.677 | 4.589  | -2.350 | 1.00 | 26.80 |
| ATOM | 1495 | CB  | TYR | 1677 | 15.742 | 5.310  | -1.398 | 1.00 | 26.05 |
| ATOM | 1496 | CG  | TYR | 1677 | 16.442 | 6.367  | -0.580 | 1.00 | 26.92 |
| ATOM | 1497 | CD1 | TYR | 1677 | 16.510 | 7.693  | -1.018 | 1.00 | 23.98 |
| ATOM | 1498 | CE1 | TYR | 1677 | 17.129 | 8.665  | -0.250 | 1.00 | 23.90 |
| ATOM | 1499 | CD2 | TYR | 1677 | 17.022 | 6.048  | 0.644  | 1.00 | 26.99 |
| ATOM | 1500 | CE2 | TYR | 1677 | 17.642 | 7.017  | 1.414  | 1.00 | 24.87 |
| ATOM | 1501 | CZ  | TYR | 1677 | 17.685 | 8.315  | 0.968  | 1.00 | 26.44 |
| ATOM | 1502 | OH  | TYR | 1677 | 18.227 | 9.273  | 1.783  | 1.00 | 30.89 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1503 | C   | TYR | 1677 | 16.006 | 3.350  | -2.894 | 1.00 | 26.30 |
| ATOM | 1504 | O   | TYR | 1677 | 15.080 | 3.445  | -3.703 | 1.00 | 28.12 |
| ATOM | 1505 | N   | THR | 1678 | 16.489 | 2.197  | -2.458 | 1.00 | 25.46 |
| ATOM | 1506 | CA  | THR | 1678 | 15.973 | 0.918  | -2.927 | 1.00 | 26.27 |
| ATOM | 1507 | CB  | THR | 1678 | 16.904 | 0.336  | -3.994 | 1.00 | 28.43 |
| ATOM | 1508 | OG1 | THR | 1678 | 18.185 | 0.095  | -3.405 | 1.00 | 30.59 |
| ATOM | 1509 | CG2 | THR | 1678 | 17.068 | 1.305  | -5.174 | 1.00 | 26.56 |
| ATOM | 1510 | C   | THR | 1678 | 15.987 | -0.049 | -1.758 | 1.00 | 24.60 |
| ATOM | 1511 | O   | THR | 1678 | 16.476 | 0.277  | -0.693 | 1.00 | 27.15 |
| ATOM | 1512 | N   | HIS | 1679 | 15.500 | -1.260 | -1.974 | 1.00 | 23.23 |
| ATOM | 1513 | CA  | HIS | 1679 | 15.496 | -2.276 | -0.933 | 1.00 | 21.51 |
| ATOM | 1514 | CB  | HIS | 1679 | 14.747 | -3.520 | -1.411 | 1.00 | 20.84 |
| ATOM | 1515 | CG  | HIS | 1679 | 13.297 | -3.279 | -1.695 | 1.00 | 21.48 |
| ATOM | 1516 | CD2 | HIS | 1679 | 12.552 | -3.476 | -2.812 | 1.00 | 22.71 |
| ATOM | 1517 | ND1 | HIS | 1679 | 12.423 | -2.795 | -0.741 | 1.00 | 27.21 |
| ATOM | 1518 | CE1 | HIS | 1679 | 11.206 | -2.713 | -1.255 | 1.00 | 22.60 |
| ATOM | 1519 | NE2 | HIS | 1679 | 11.255 | -3.116 | -2.515 | 1.00 | 23.66 |
| ATOM | 1520 | C   | HIS | 1679 | 16.976 | -2.591 | -0.665 | 1.00 | 20.81 |
| ATOM | 1521 | O   | HIS | 1679 | 17.358 | -2.954 | 0.451  | 1.00 | 22.50 |
| ATOM | 1522 | N   | GLN | 1680 | 17.799 | -2.382 | -1.695 | 1.00 | 19.58 |
| ATOM | 1523 | CA  | GLN | 1680 | 19.248 | -2.587 | -1.657 | 1.00 | 20.89 |
| ATOM | 1524 | CB  | GLN | 1680 | 19.860 | -2.400 | -3.038 | 1.00 | 23.76 |
| ATOM | 1525 | CG  | GLN | 1680 | 19.896 | -3.651 | -3.877 | 1.00 | 34.08 |
| ATOM | 1526 | CD  | GLN | 1680 | 19.015 | -3.559 | -5.096 | 1.00 | 37.77 |
| ATOM | 1527 | OE1 | GLN | 1680 | 18.069 | -2.780 | -5.122 | 1.00 | 43.23 |
| ATOM | 1528 | NE2 | GLN | 1680 | 19.321 | -4.356 | -6.113 | 1.00 | 37.02 |
| ATOM | 1529 | C   | GLN | 1680 | 19.913 | -1.609 | -0.724 | 1.00 | 20.72 |
| ATOM | 1530 | O   | GLN | 1680 | 20.814 | -1.981 | 0.021  | 1.00 | 21.53 |
| ATOM | 1531 | N   | SER | 1681 | 19.514 | -0.350 | -0.773 | 1.00 | 21.01 |
| ATOM | 1532 | CA  | SER | 1681 | 20.128 | 0.606  | 0.135  | 1.00 | 23.86 |
| ATOM | 1533 | CB  | SER | 1681 | 19.841 | 2.065  | -0.248 | 1.00 | 21.10 |
| ATOM | 1534 | OG  | SER | 1681 | 18.473 | 2.290  | -0.506 | 1.00 | 23.18 |
| ATOM | 1535 | C   | SER | 1681 | 19.695 | 0.292  | 1.564  | 1.00 | 23.91 |
| ATOM | 1536 | O   | SER | 1681 | 20.457 | 0.542  | 2.495  | 1.00 | 26.70 |
| ATOM | 1537 | N   | ASP | 1682 | 18.511 | -0.303 | 1.739  | 1.00 | 21.71 |
| ATOM | 1538 | CA  | ASP | 1682 | 18.044 | -0.662 | 3.080  | 1.00 | 21.28 |
| ATOM | 1539 | CB  | ASP | 1682 | 16.595 | -1.149 | 3.070  | 1.00 | 23.22 |
| ATOM | 1540 | CG  | ASP | 1682 | 15.569 | -0.016 | 3.198  | 1.00 | 23.08 |
| ATOM | 1541 | OD1 | ASP | 1682 | 14.363 | -0.282 | 3.017  | 1.00 | 21.99 |
| ATOM | 1542 | OD2 | ASP | 1682 | 15.948 | 1.135  | 3.498  | 1.00 | 24.42 |
| ATOM | 1543 | C   | ASP | 1682 | 18.955 | -1.756 | 3.611  | 1.00 | 20.86 |
| ATOM | 1544 | O   | ASP | 1682 | 19.289 | -1.770 | 4.799  | 1.00 | 21.62 |
| ATOM | 1545 | N   | VAL | 1683 | 19.398 | -2.649 | 2.727  | 1.00 | 21.60 |
| ATOM | 1546 | CA  | VAL | 1683 | 20.307 | -3.732 | 3.122  | 1.00 | 22.27 |
| ATOM | 1547 | CB  | VAL | 1683 | 20.515 | -4.740 | 1.965  | 1.00 | 22.22 |
| ATOM | 1548 | CG1 | VAL | 1683 | 21.587 | -5.777 | 2.315  | 1.00 | 21.52 |
| ATOM | 1549 | CG2 | VAL | 1683 | 19.187 | -5.437 | 1.662  | 1.00 | 20.89 |
| ATOM | 1550 | C   | VAL | 1683 | 21.618 | -3.150 | 3.666  | 1.00 | 21.96 |
| ATOM | 1551 | O   | VAL | 1683 | 22.107 | -3.577 | 4.705  | 1.00 | 24.39 |
| ATOM | 1552 | N   | TRP | 1684 | 22.172 | -2.160 | 2.970  | 1.00 | 22.01 |
| ATOM | 1553 | CA  | TRP | 1684 | 23.375 | -1.489 | 3.449  | 1.00 | 23.06 |
| ATOM | 1554 | CB  | TRP | 1684 | 23.685 | -0.273 | 2.566  | 1.00 | 20.25 |



|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1555 | CG  | TRP | 1684 | 24.808 | 0.549  | 3.069  | 1.00 | 22.35 |
| ATOM | 1556 | CD2 | TRP | 1684 | 26.118 | 0.644  | 2.503  | 1.00 | 24.14 |
| ATOM | 1557 | CE2 | TRP | 1684 | 26.879 | 1.500  | 3.334  | 1.00 | 23.68 |
| ATOM | 1558 | CE3 | TRP | 1684 | 26.728 | 0.091  | 1.370  | 1.00 | 25.09 |
| ATOM | 1559 | CD1 | TRP | 1684 | 24.825 | 1.346  | 4.193  | 1.00 | 22.52 |
| ATOM | 1560 | NE1 | TRP | 1684 | 26.066 | 1.915  | 4.355  | 1.00 | 21.48 |
| ATOM | 1561 | CZ2 | TRP | 1684 | 28.216 | 1.815  | 3.061  | 1.00 | 20.56 |
| ATOM | 1562 | CZ3 | TRP | 1684 | 28.059 | 0.405  | 1.095  | 1.00 | 23.92 |
| ATOM | 1563 | CH2 | TRP | 1684 | 28.785 | 1.257  | 1.942  | 1.00 | 23.18 |
| ATOM | 1564 | C   | TRP | 1684 | 23.105 | -1.025 | 4.903  | 1.00 | 23.96 |
| ATOM | 1565 | O   | TRP | 1684 | 23.889 | -1.308 | 5.815  | 1.00 | 25.98 |
| ATOM | 1566 | N   | SER | 1685 | 21.992 | -0.332 | 5.118  | 1.00 | 24.68 |
| ATOM | 1567 | CA  | SER | 1685 | 21.615 | 0.144  | 6.447  | 1.00 | 22.75 |
| ATOM | 1568 | CB  | SER | 1685 | 20.266 | 0.870  | 6.376  | 1.00 | 21.11 |
| ATOM | 1569 | OG  | SER | 1685 | 20.276 | 1.950  | 5.452  | 1.00 | 21.98 |
| ATOM | 1570 | C   | SER | 1685 | 21.516 | -1.011 | 7.457  | 1.00 | 23.06 |
| ATOM | 1571 | O   | SER | 1685 | 21.865 | -0.850 | 8.638  | 1.00 | 22.55 |
| ATOM | 1572 | N   | PHE | 1686 | 21.041 | -2.168 | 6.998  | 1.00 | 21.83 |
| ATOM | 1573 | CA  | PHE | 1686 | 20.915 | -3.340 | 7.854  | 1.00 | 21.92 |
| ATOM | 1574 | CB  | PHE | 1686 | 20.153 | -4.457 | 7.129  | 1.00 | 18.02 |
| ATOM | 1575 | CG  | PHE | 1686 | 19.965 | -5.683 | 7.971  | 1.00 | 20.86 |
| ATOM | 1576 | CD1 | PHE | 1686 | 19.142 | -5.641 | 9.108  | 1.00 | 18.76 |
| ATOM | 1577 | CD2 | PHE | 1686 | 20.669 | -6.853 | 7.688  | 1.00 | 18.96 |
| ATOM | 1578 | CE1 | PHE | 1686 | 19.023 | -6.743 | 9.947  | 1.00 | 19.29 |
| ATOM | 1579 | CE2 | PHE | 1686 | 20.554 | -7.965 | 8.514  | 1.00 | 19.27 |
| ATOM | 1580 | CZ  | PHE | 1686 | 19.732 | -7.908 | 9.653  | 1.00 | 21.91 |
| ATOM | 1581 | C   | PHE | 1686 | 22.304 | -3.845 | 8.316  | 1.00 | 22.11 |
| ATOM | 1582 | O   | PHE | 1686 | 22.473 | -4.378 | 9.436  | 1.00 | 21.35 |
| ATOM | 1583 | N   | GLY | 1687 | 23.294 | -3.691 | 7.436  | 1.00 | 20.48 |
| ATOM | 1584 | CA  | GLY | 1687 | 24.653 | -4.079 | 7.769  | 1.00 | 20.41 |
| ATOM | 1585 | C   | GLY | 1687 | 25.185 | -3.211 | 8.899  | 1.00 | 19.03 |
| ATOM | 1586 | O   | GLY | 1687 | 25.857 | -3.714 | 9.808  | 1.00 | 20.27 |
| ATOM | 1587 | N   | VAL | 1688 | 24.893 | -1.906 | 8.829  | 1.00 | 20.57 |
| ATOM | 1588 | CA  | VAL | 1688 | 25.296 | -0.937 | 9.860  | 1.00 | 21.14 |
| ATOM | 1589 | CB  | VAL | 1688 | 24.974 | 0.548  | 9.467  | 1.00 | 20.78 |
| ATOM | 1590 | CG1 | VAL | 1688 | 25.440 | 1.493  | 10.564 | 1.00 | 21.51 |
| ATOM | 1591 | CG2 | VAL | 1688 | 25.681 | 0.923  | 8.186  | 1.00 | 19.70 |
| ATOM | 1592 | C   | VAL | 1688 | 24.547 | -1.297 | 11.142 | 1.00 | 23.16 |
| ATOM | 1593 | O   | VAL | 1688 | 25.126 | -1.271 | 12.225 | 1.00 | 24.14 |
| ATOM | 1594 | N   | LEU | 1689 | 23.264 | -1.648 | 11.021 | 1.00 | 24.50 |
| ATOM | 1595 | CA  | LEU | 1689 | 22.465 | -2.058 | 12.187 | 1.00 | 25.93 |
| ATOM | 1596 | CB  | LEU | 1689 | 21.008 | -2.316 | 11.776 | 1.00 | 25.42 |
| ATOM | 1597 | CG  | LEU | 1689 | 19.933 | -2.392 | 12.874 | 1.00 | 26.29 |
| ATOM | 1598 | CD1 | LEU | 1689 | 18.572 | -2.053 | 12.272 | 1.00 | 23.43 |
| ATOM | 1599 | CD2 | LEU | 1689 | 19.885 | -3.768 | 13.543 | 1.00 | 25.66 |
| ATOM | 1600 | C   | LEU | 1689 | 23.080 | -3.330 | 12.797 | 1.00 | 28.01 |
| ATOM | 1601 | O   | LEU | 1689 | 23.203 | -3.426 | 14.016 | 1.00 | 30.06 |
| ATOM | 1602 | N   | LEU | 1690 | 23.487 | -4.287 | 11.956 | 1.00 | 27.19 |
| ATOM | 1603 | CA  | LEU | 1690 | 24.111 | -5.520 | 12.457 | 1.00 | 25.29 |
| ATOM | 1604 | CB  | LEU | 1690 | 24.556 | -6.446 | 11.315 | 1.00 | 24.98 |
| ATOM | 1605 | CG  | LEU | 1690 | 23.594 | -7.390 | 10.589 | 1.00 | 24.85 |
| ATOM | 1606 | CD1 | LEU | 1690 | 24.385 | -8.132 | 9.538  | 1.00 | 24.22 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1607 | CD2 | LEU | 1690 | 22.960 | -8.434  | 11.512 | 1.00 | 19.10 |
| ATOM | 1608 | C   | LEU | 1690 | 25.326 | -5.123  | 13.291 | 1.00 | 24.70 |
| ATOM | 1609 | O   | LEU | 1690 | 25.521 | -5.624  | 14.408 | 1.00 | 23.57 |
| ATOM | 1610 | N   | TRP | 1691 | 26.117 | -4.197  | 12.747 | 1.00 | 23.68 |
| ATOM | 1611 | CA  | TRP | 1691 | 27.316 | -3.693  | 13.425 | 1.00 | 24.83 |
| ATOM | 1612 | CB  | TRP | 1691 | 27.998 | -2.621  | 12.567 | 1.00 | 20.94 |
| ATOM | 1613 | CG  | TRP | 1691 | 29.331 | -2.173  | 13.105 | 1.00 | 24.80 |
| ATOM | 1614 | CD2 | TRP | 1691 | 29.565 | -1.082  | 14.004 | 1.00 | 23.71 |
| ATOM | 1615 | CE2 | TRP | 1691 | 30.966 | -0.996  | 14.208 | 1.00 | 23.81 |
| ATOM | 1616 | CE3 | TRP | 1691 | 28.726 | -0.167  | 14.652 | 1.00 | 22.20 |
| ATOM | 1617 | CD1 | TRP | 1691 | 30.570 | -2.702  | 12.811 | 1.00 | 24.44 |
| ATOM | 1618 | NE1 | TRP | 1691 | 31.550 | -1.995  | 13.471 | 1.00 | 25.38 |
| ATOM | 1619 | CZ2 | TRP | 1691 | 31.543 | -0.022  | 15.034 | 1.00 | 24.39 |
| ATOM | 1620 | CZ3 | TRP | 1691 | 29.300 | 0.799   | 15.484 | 1.00 | 21.99 |
| ATOM | 1621 | CH2 | TRP | 1691 | 30.700 | 0.862   | 15.665 | 1.00 | 25.57 |
| ATOM | 1622 | C   | TRP | 1691 | 26.998 | -3.131  | 14.823 | 1.00 | 25.87 |
| ATOM | 1623 | O   | TRP | 1691 | 27.772 | -3.301  | 15.750 | 1.00 | 27.39 |
| ATOM | 1624 | N   | GLU | 1692 | 25.865 | -2.448  | 14.956 | 1.00 | 26.45 |
| ATOM | 1625 | CA  | GLU | 1692 | 25.452 | -1.869  | 16.238 | 1.00 | 25.13 |
| ATOM | 1626 | CB  | GLU | 1692 | 24.257 | -0.933  | 16.068 | 1.00 | 23.56 |
| ATOM | 1627 | CG  | GLU | 1692 | 24.365 | 0.091   | 14.962 | 1.00 | 18.73 |
| ATOM | 1628 | CD  | GLU | 1692 | 23.111 | 0.935   | 14.880 | 1.00 | 23.79 |
| ATOM | 1629 | OE1 | GLU | 1692 | 22.303 | 0.722   | 13.962 | 1.00 | 22.70 |
| ATOM | 1630 | OE2 | GLU | 1692 | 22.919 | 1.819   | 15.738 | 1.00 | 25.63 |
| ATOM | 1631 | C   | GLU | 1692 | 25.072 | -2.963  | 17.225 | 1.00 | 25.28 |
| ATOM | 1632 | O   | GLU | 1692 | 25.278 | -2.818  | 18.422 | 1.00 | 27.65 |
| ATOM | 1633 | N   | ILE | 1693 | 24.484 | -4.046  | 16.720 | 1.00 | 26.23 |
| ATOM | 1634 | CA  | ILE | 1693 | 24.080 | -5.164  | 17.565 | 1.00 | 23.81 |
| ATOM | 1635 | CB  | ILE | 1693 | 23.177 | -6.203  | 16.787 | 1.00 | 22.99 |
| ATOM | 1636 | CG2 | ILE | 1693 | 22.966 | -7.465  | 17.637 | 1.00 | 21.67 |
| ATOM | 1637 | CG1 | ILE | 1693 | 21.820 | -5.569  | 16.416 | 1.00 | 20.23 |
| ATOM | 1638 | CD1 | ILE | 1693 | 20.964 | -6.395  | 15.435 | 1.00 | 13.67 |
| ATOM | 1639 | C   | ILE | 1693 | 25.322 | -5.843  | 18.133 | 1.00 | 24.77 |
| ATOM | 1640 | O   | ILE | 1693 | 25.401 | -6.126  | 19.324 | 1.00 | 24.94 |
| ATOM | 1641 | N   | PHE | 1694 | 26.329 | -6.051  | 17.304 | 1.00 | 27.59 |
| ATOM | 1642 | CA  | PHE | 1694 | 27.503 | -6.709  | 17.827 | 1.00 | 29.42 |
| ATOM | 1643 | CB  | PHE | 1694 | 28.122 | -7.623  | 16.771 | 1.00 | 29.37 |
| ATOM | 1644 | CG  | PHE | 1694 | 27.142 | -8.649  | 16.263 | 1.00 | 27.99 |
| ATOM | 1645 | CD1 | PHE | 1694 | 26.522 | -8.486  | 15.034 | 1.00 | 28.43 |
| ATOM | 1646 | CD2 | PHE | 1694 | 26.751 | -9.709  | 17.074 | 1.00 | 27.86 |
| ATOM | 1647 | CE1 | PHE | 1694 | 25.525 | -9.355  | 14.625 | 1.00 | 30.12 |
| ATOM | 1648 | CE2 | PHE | 1694 | 25.751 | -10.586 | 16.674 | 1.00 | 25.78 |
| ATOM | 1649 | CZ  | PHE | 1694 | 25.136 | -10.408 | 15.453 | 1.00 | 26.17 |
| ATOM | 1650 | C   | PHE | 1694 | 28.495 | -5.821  | 18.578 | 1.00 | 29.83 |
| ATOM | 1651 | O   | PHE | 1694 | 29.485 | -6.305  | 19.126 | 1.00 | 32.81 |
| ATOM | 1652 | N   | THR | 1695 | 28.217 | -4.516  | 18.635 | 1.00 | 28.35 |
| ATOM | 1653 | CA  | THR | 1695 | 29.044 | -3.598  | 19.419 | 1.00 | 25.39 |
| ATOM | 1654 | CB  | THR | 1695 | 29.540 | -2.379  | 18.627 | 1.00 | 21.81 |
| ATOM | 1655 | OG1 | THR | 1695 | 28.422 | -1.628  | 18.137 | 1.00 | 21.54 |
| ATOM | 1656 | CG2 | THR | 1695 | 30.457 | -2.816  | 17.508 | 1.00 | 16.93 |
| ATOM | 1657 | C   | THR | 1695 | 28.198 | -3.126  | 20.604 | 1.00 | 26.16 |
| ATOM | 1658 | O   | THR | 1695 | 28.620 | -2.268  | 21.386 | 1.00 | 26.77 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1659 | N   | LEU | 1696 | 27.023 | -3.747 | 20.747 | 1.00 | 26.87 |
| ATOM | 1660 | CA  | LEU | 1696 | 26.069 | -3.446 | 21.813 | 1.00 | 27.64 |
| ATOM | 1661 | CB  | LEU | 1696 | 26.572 | -3.977 | 23.156 | 1.00 | 30.54 |
| ATOM | 1662 | CG  | LEU | 1696 | 26.903 | -5.456 | 23.182 | 1.00 | 29.75 |
| ATOM | 1663 | CD1 | LEU | 1696 | 27.448 | -5.821 | 24.546 | 1.00 | 32.53 |
| ATOM | 1664 | CD2 | LEU | 1696 | 25.658 | -6.234 | 22.882 | 1.00 | 33.79 |
| ATOM | 1665 | C   | LEU | 1696 | 25.727 | -1.984 | 21.946 | 1.00 | 25.51 |
| ATOM | 1666 | O   | LEU | 1696 | 25.824 | -1.410 | 23.025 | 1.00 | 27.90 |
| ATOM | 1667 | N   | GLY | 1697 | 25.265 | -1.395 | 20.857 | 1.00 | 26.48 |
| ATOM | 1668 | CA  | GLY | 1697 | 24.899 | 0.007  | 20.859 | 1.00 | 25.81 |
| ATOM | 1669 | C   | GLY | 1697 | 26.040 | 0.900  | 20.452 | 1.00 | 26.40 |
| ATOM | 1670 | O   | GLY | 1697 | 26.055 | 2.090  | 20.760 | 1.00 | 29.69 |
| ATOM | 1671 | N   | GLY | 1698 | 27.008 | 0.330  | 19.748 | 1.00 | 27.65 |
| ATOM | 1672 | CA  | GLY | 1698 | 28.150 | 1.110  | 19.314 | 1.00 | 28.38 |
| ATOM | 1673 | C   | GLY | 1698 | 27.795 | 2.186  | 18.310 | 1.00 | 30.13 |
| ATOM | 1674 | O   | GLY | 1698 | 26.896 | 2.028  | 17.496 | 1.00 | 32.55 |
| ATOM | 1675 | N   | SER | 1699 | 28.520 | 3.295  | 18.375 | 1.00 | 30.56 |
| ATOM | 1676 | CA  | SER | 1699 | 28.304 | 4.420  | 17.491 | 1.00 | 32.11 |
| ATOM | 1677 | CB  | SER | 1699 | 28.622 | 5.714  | 18.246 | 1.00 | 33.58 |
| ATOM | 1678 | OG  | SER | 1699 | 28.578 | 6.863  | 17.407 | 1.00 | 38.87 |
| ATOM | 1679 | C   | SER | 1699 | 29.203 | 4.269  | 16.268 | 1.00 | 32.10 |
| ATOM | 1680 | O   | SER | 1699 | 30.408 | 4.073  | 16.403 | 1.00 | 31.12 |
| ATOM | 1681 | N   | PRO | 1700 | 28.629 | 4.324  | 15.062 | 1.00 | 32.70 |
| ATOM | 1682 | CD  | PRO | 1700 | 27.204 | 4.482  | 14.745 | 1.00 | 34.35 |
| ATOM | 1683 | CA  | PRO | 1700 | 29.427 | 4.192  | 13.837 | 1.00 | 32.25 |
| ATOM | 1684 | CB  | PRO | 1700 | 28.358 | 4.096  | 12.736 | 1.00 | 32.85 |
| ATOM | 1685 | CG  | PRO | 1700 | 27.101 | 3.713  | 13.461 | 1.00 | 35.54 |
| ATOM | 1686 | C   | PRO | 1700 | 30.258 | 5.456  | 13.651 | 1.00 | 31.84 |
| ATOM | 1687 | O   | PRO | 1700 | 29.792 | 6.550  | 13.983 | 1.00 | 31.56 |
| ATOM | 1688 | N   | TYR | 1701 | 31.487 | 5.306  | 13.170 | 1.00 | 31.07 |
| ATOM | 1689 | CA  | TYR | 1701 | 32.372 | 6.441  | 12.910 | 1.00 | 32.41 |
| ATOM | 1690 | CB  | TYR | 1701 | 32.039 | 7.055  | 11.537 | 1.00 | 32.39 |
| ATOM | 1691 | CG  | TYR | 1701 | 32.088 | 6.092  | 10.378 | 1.00 | 35.63 |
| ATOM | 1692 | CD1 | TYR | 1701 | 30.936 | 5.807  | 9.638  | 1.00 | 37.94 |
| ATOM | 1693 | CE1 | TYR | 1701 | 30.977 | 4.955  | 8.535  | 1.00 | 40.79 |
| ATOM | 1694 | CD2 | TYR | 1701 | 33.293 | 5.495  | 9.990  | 1.00 | 37.49 |
| ATOM | 1695 | CE2 | TYR | 1701 | 33.351 | 4.646  | 8.886  | 1.00 | 41.82 |
| ATOM | 1696 | CZ  | TYR | 1701 | 32.190 | 4.382  | 8.160  | 1.00 | 45.96 |
| ATOM | 1697 | OH  | TYR | 1701 | 32.251 | 3.572  | 7.039  | 1.00 | 55.61 |
| ATOM | 1698 | C   | TYR | 1701 | 32.377 | 7.559  | 13.970 | 1.00 | 32.85 |
| ATOM | 1699 | O   | TYR | 1701 | 32.066 | 8.711  | 13.679 | 1.00 | 32.41 |
| ATOM | 1700 | N   | PRO | 1702 | 32.753 | 7.229  | 15.215 | 1.00 | 34.48 |
| ATOM | 1701 | CD  | PRO | 1702 | 33.288 | 5.946  | 15.695 | 1.00 | 35.64 |
| ATOM | 1702 | CA  | PRO | 1702 | 32.775 | 8.258  | 16.270 | 1.00 | 33.68 |
| ATOM | 1703 | CB  | PRO | 1702 | 33.321 | 7.499  | 17.482 | 1.00 | 32.52 |
| ATOM | 1704 | CG  | PRO | 1702 | 33.063 | 6.061  | 17.166 | 1.00 | 38.81 |
| ATOM | 1705 | C   | PRO | 1702 | 33.736 | 9.388  | 15.919 | 1.00 | 33.47 |
| ATOM | 1706 | O   | PRO | 1702 | 34.875 | 9.145  | 15.522 | 1.00 | 34.66 |
| ATOM | 1707 | N   | GLY | 1703 | 33.275 | 10.625 | 16.089 | 1.00 | 35.31 |
| ATOM | 1708 | CA  | GLY | 1703 | 34.101 | 11.792 | 15.802 | 1.00 | 32.51 |
| ATOM | 1709 | C   | GLY | 1703 | 34.232 | 12.166 | 14.339 | 1.00 | 33.68 |
| ATOM | 1710 | O   | GLY | 1703 | 34.904 | 13.146 | 14.005 | 1.00 | 31.22 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1711 | N   | VAL | 1704 | 33.583 | 11.404 | 13.462 | 1.00 | 35.00 |
| ATOM | 1712 | CA  | VAL | 1704 | 33.641 | 11.658 | 12.026 | 1.00 | 33.25 |
| ATOM | 1713 | CB  | VAL | 1704 | 33.679 | 10.335 | 11.241 | 1.00 | 31.04 |
| ATOM | 1714 | CG1 | VAL | 1704 | 33.825 | 10.605 | 9.766  | 1.00 | 32.72 |
| ATOM | 1715 | CG2 | VAL | 1704 | 34.825 | 9.477  | 11.727 | 1.00 | 26.97 |
| ATOM | 1716 | C   | VAL | 1704 | 32.475 | 12.529 | 11.533 | 1.00 | 34.75 |
| ATOM | 1717 | O   | VAL | 1704 | 31.316 | 12.151 | 11.643 | 1.00 | 36.79 |
| ATOM | 1718 | N   | PRO | 1705 | 32.787 | 13.735 | 11.032 | 1.00 | 35.01 |
| ATOM | 1719 | CD  | PRO | 1705 | 34.133 | 14.333 | 11.086 | 1.00 | 35.61 |
| ATOM | 1720 | CA  | PRO | 1705 | 31.801 | 14.685 | 10.512 | 1.00 | 35.33 |
| ATOM | 1721 | CB  | PRO | 1705 | 32.539 | 16.020 | 10.617 | 1.00 | 35.59 |
| ATOM | 1722 | CG  | PRO | 1705 | 33.950 | 15.625 | 10.339 | 1.00 | 37.23 |
| ATOM | 1723 | C   | PRO | 1705 | 31.388 | 14.375 | 9.074  | 1.00 | 36.33 |
| ATOM | 1724 | O   | PRO | 1705 | 32.125 | 13.695 | 8.355  | 1.00 | 38.44 |
| ATOM | 1725 | N   | VAL | 1706 | 30.240 | 14.912 | 8.649  | 1.00 | 34.93 |
| ATOM | 1726 | CA  | VAL | 1706 | 29.675 | 14.704 | 7.303  | 1.00 | 35.19 |
| ATOM | 1727 | CB  | VAL | 1706 | 28.607 | 15.791 | 6.984  | 1.00 | 36.19 |
| ATOM | 1728 | CG1 | VAL | 1706 | 28.011 | 15.586 | 5.586  | 1.00 | 36.30 |
| ATOM | 1729 | CG2 | VAL | 1706 | 27.494 | 15.739 | 8.028  | 1.00 | 32.74 |
| ATOM | 1730 | C   | VAL | 1706 | 30.696 | 14.632 | 6.155  | 1.00 | 36.20 |
| ATOM | 1731 | O   | VAL | 1706 | 30.796 | 13.618 | 5.463  | 1.00 | 38.16 |
| ATOM | 1732 | N   | GLU | 1707 | 31.479 | 15.695 | 6.020  | 1.00 | 34.38 |
| ATOM | 1733 | CA  | GLU | 1707 | 32.500 | 15.819 | 4.987  | 1.00 | 33.75 |
| ATOM | 1734 | CB  | GLU | 1707 | 33.181 | 17.184 | 5.083  | 1.00 | 35.79 |
| ATOM | 1735 | C   | GLU | 1707 | 33.567 | 14.731 | 4.982  | 1.00 | 31.97 |
| ATOM | 1736 | O   | GLU | 1707 | 34.036 | 14.311 | 3.923  | 1.00 | 32.84 |
| ATOM | 1737 | N   | GLU | 1708 | 33.964 | 14.280 | 6.160  | 1.00 | 29.57 |
| ATOM | 1738 | CA  | GLU | 1708 | 34.987 | 13.249 | 6.249  | 1.00 | 31.32 |
| ATOM | 1739 | CB  | GLU | 1708 | 35.567 | 13.204 | 7.664  | 1.00 | 36.11 |
| ATOM | 1740 | CG  | GLU | 1708 | 36.189 | 14.508 | 8.144  | 1.00 | 44.10 |
| ATOM | 1741 | CD  | GLU | 1708 | 37.444 | 14.923 | 7.383  | 1.00 | 55.58 |
| ATOM | 1742 | OE1 | GLU | 1708 | 38.059 | 14.082 | 6.681  | 1.00 | 61.47 |
| ATOM | 1743 | OE2 | GLU | 1708 | 37.830 | 16.115 | 7.517  | 1.00 | 60.54 |
| ATOM | 1744 | C   | GLU | 1708 | 34.365 | 11.906 | 5.889  | 1.00 | 32.20 |
| ATOM | 1745 | O   | GLU | 1708 | 35.013 | 11.041 | 5.294  | 1.00 | 32.39 |
| ATOM | 1746 | N   | LEU | 1709 | 33.094 | 11.749 | 6.245  | 1.00 | 31.43 |
| ATOM | 1747 | CA  | LEU | 1709 | 32.378 | 10.522 | 5.961  | 1.00 | 31.71 |
| ATOM | 1748 | CB  | LEU | 1709 | 30.973 | 10.548 | 6.565  | 1.00 | 28.84 |
| ATOM | 1749 | CG  | LEU | 1709 | 30.136 | 9.357  | 6.081  | 1.00 | 28.28 |
| ATOM | 1750 | CD1 | LEU | 1709 | 30.662 | 8.059  | 6.679  | 1.00 | 27.34 |
| ATOM | 1751 | CD2 | LEU | 1709 | 28.705 | 9.556  | 6.437  | 1.00 | 29.71 |
| ATOM | 1752 | C   | LEU | 1709 | 32.306 | 10.317 | 4.454  | 1.00 | 30.55 |
| ATOM | 1753 | O   | LEU | 1709 | 32.489 | 9.202  | 3.970  | 1.00 | 31.79 |
| ATOM | 1754 | N   | PHE | 1710 | 32.043 | 11.399 | 3.727  | 1.00 | 30.99 |
| ATOM | 1755 | CA  | PHE | 1710 | 31.945 | 11.366 | 2.279  | 1.00 | 32.80 |
| ATOM | 1756 | CB  | PHE | 1710 | 31.680 | 12.768 | 1.737  | 1.00 | 34.22 |
| ATOM | 1757 | CG  | PHE | 1710 | 30.310 | 13.261 | 2.020  | 1.00 | 37.65 |
| ATOM | 1758 | CD1 | PHE | 1710 | 29.337 | 12.393 | 2.495  | 1.00 | 43.43 |
| ATOM | 1759 | CD2 | PHE | 1710 | 29.984 | 14.596 | 1.838  | 1.00 | 42.87 |
| ATOM | 1760 | CE1 | PHE | 1710 | 28.054 | 12.834 | 2.787  | 1.00 | 46.00 |
| ATOM | 1761 | CE2 | PHE | 1710 | 28.698 | 15.053 | 2.130  | 1.00 | 46.30 |
| ATOM | 1762 | CZ  | PHE | 1710 | 27.733 | 14.169 | 2.605  | 1.00 | 46.49 |

|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1763 | C   | PHE | 1710 | 33.196 | 10.802 | 1.667  | 1.00 | 34.25 |
| ATOM | 1764 | O   | PHE | 1710 | 33.133 | 9.948  | 0.785  | 1.00 | 36.09 |
| ATOM | 1765 | N   | LYS | 1711 | 34.324 | 11.249 | 2.209  | 1.00 | 34.37 |
| ATOM | 1766 | CA  | LYS | 1711 | 35.664 | 10.840 | 1.789  | 1.00 | 34.11 |
| ATOM | 1767 | CB  | LYS | 1711 | 36.672 | 11.768 | 2.476  | 1.00 | 37.74 |
| ATOM | 1768 | CG  | LYS | 1711 | 38.114 | 11.567 | 2.119  | 1.00 | 43.59 |
| ATOM | 1769 | CD  | LYS | 1711 | 38.978 | 12.573 | 2.857  | 1.00 | 46.97 |
| ATOM | 1770 | CE  | LYS | 1711 | 40.386 | 12.575 | 2.304  | 1.00 | 51.53 |
| ATOM | 1771 | NZ  | LYS | 1711 | 41.074 | 11.291 | 2.603  | 1.00 | 58.84 |
| ATOM | 1772 | C   | LYS | 1711 | 35.948 | 9.354  | 2.103  | 1.00 | 33.25 |
| ATOM | 1773 | O   | LYS | 1711 | 36.512 | 8.641  | 1.274  | 1.00 | 32.22 |
| ATOM | 1774 | N   | LEU | 1712 | 35.537 | 8.894  | 3.285  | 1.00 | 32.62 |
| ATOM | 1775 | CA  | LEU | 1712 | 35.718 | 7.496  | 3.667  | 1.00 | 31.41 |
| ATOM | 1776 | CB  | LEU | 1712 | 35.223 | 7.237  | 5.106  | 1.00 | 29.80 |
| ATOM | 1777 | CG  | LEU | 1712 | 36.020 | 7.889  | 6.244  | 1.00 | 29.22 |
| ATOM | 1778 | CD1 | LEU | 1712 | 35.385 | 7.643  | 7.608  | 1.00 | 24.09 |
| ATOM | 1779 | CD2 | LEU | 1712 | 37.437 | 7.356  | 6.234  | 1.00 | 28.36 |
| ATOM | 1780 | C   | LEU | 1712 | 34.939 | 6.638  | 2.674  | 1.00 | 31.88 |
| ATOM | 1781 | O   | LEU | 1712 | 35.452 | 5.654  | 2.143  | 1.00 | 34.08 |
| ATOM | 1782 | N   | LEU | 1713 | 33.700 | 7.029  | 2.413  | 1.00 | 32.28 |
| ATOM | 1783 | CA  | LEU | 1713 | 32.850 | 6.305  | 1.482  | 1.00 | 35.36 |
| ATOM | 1784 | CB  | LEU | 1713 | 31.433 | 6.887  | 1.485  | 1.00 | 38.97 |
| ATOM | 1785 | CG  | LEU | 1713 | 30.629 | 6.494  | 2.730  | 1.00 | 39.56 |
| ATOM | 1786 | CD1 | LEU | 1713 | 29.308 | 7.228  | 2.768  | 1.00 | 37.14 |
| ATOM | 1787 | CD2 | LEU | 1713 | 30.424 | 4.988  | 2.748  | 1.00 | 37.73 |
| ATOM | 1788 | C   | LEU | 1713 | 33.430 | 6.296  | 0.070  | 1.00 | 36.47 |
| ATOM | 1789 | O   | LEU | 1713 | 33.502 | 5.244  | -0.563 | 1.00 | 39.32 |
| ATOM | 1790 | N   | LYS | 1714 | 33.855 | 7.455  | -0.413 | 1.00 | 35.21 |
| ATOM | 1791 | CA  | LYS | 1714 | 34.437 | 7.544  | -1.743 | 1.00 | 34.55 |
| ATOM | 1792 | CB  | LYS | 1714 | 34.812 | 8.984  | -2.075 | 1.00 | 34.81 |
| ATOM | 1793 | CG  | LYS | 1714 | 33.624 | 9.903  | -2.290 | 1.00 | 36.55 |
| ATOM | 1794 | CD  | LYS | 1714 | 32.681 | 9.372  | -3.353 | 1.00 | 40.68 |
| ATOM | 1795 | CE  | LYS | 1714 | 31.488 | 10.310 | -3.577 | 1.00 | 44.87 |
| ATOM | 1796 | NZ  | LYS | 1714 | 30.611 | 9.853  | -4.701 | 1.00 | 50.99 |
| ATOM | 1797 | C   | LYS | 1714 | 35.671 | 6.649  | -1.856 | 1.00 | 35.97 |
| ATOM | 1798 | O   | LYS | 1714 | 35.948 | 6.084  | -2.920 | 1.00 | 38.11 |
| ATOM | 1799 | N   | GLU | 1715 | 36.385 | 6.490  | -0.749 | 1.00 | 33.65 |
| ATOM | 1800 | CA  | GLU | 1715 | 37.582 | 5.663  | -0.729 | 1.00 | 34.34 |
| ATOM | 1801 | CB  | GLU | 1715 | 38.574 | 6.221  | 0.288  | 1.00 | 34.90 |
| ATOM | 1802 | CG  | GLU | 1715 | 39.032 | 7.613  | -0.110 | 1.00 | 42.07 |
| ATOM | 1803 | CD  | GLU | 1715 | 39.729 | 8.405  | 0.989  | 1.00 | 47.94 |
| ATOM | 1804 | OE1 | GLU | 1715 | 39.977 | 7.870  | 2.098  | 1.00 | 45.03 |
| ATOM | 1805 | OE2 | GLU | 1715 | 40.026 | 9.596  | 0.709  | 1.00 | 51.48 |
| ATOM | 1806 | C   | GLU | 1715 | 37.285 | 4.191  | -0.466 | 1.00 | 34.76 |
| ATOM | 1807 | O   | GLU | 1715 | 38.205 | 3.384  | -0.411 | 1.00 | 37.36 |
| ATOM | 1808 | N   | GLY | 1716 | 36.002 | 3.848  | -0.347 | 1.00 | 32.00 |
| ATOM | 1809 | CA  | GLY | 1716 | 35.604 | 2.474  | -0.122 | 1.00 | 30.49 |
| ATOM | 1810 | C   | GLY | 1716 | 35.932 | 1.937  | 1.251  | 1.00 | 31.32 |
| ATOM | 1811 | O   | GLY | 1716 | 36.134 | 0.738  | 1.430  | 1.00 | 31.83 |
| ATOM | 1812 | N   | HIS | 1717 | 35.957 | 2.822  | 2.233  | 1.00 | 31.55 |
| ATOM | 1813 | CA  | HIS | 1717 | 36.265 | 2.416  | 3.595  | 1.00 | 33.20 |
| ATOM | 1814 | CB  | HIS | 1717 | 36.494 | 3.661  | 4.452  | 1.00 | 37.67 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1815 | CG  | HIS | 1717 | 36.786 | 3.360   | 5.895  | 1.00 | 42.42 |
| ATOM | 1816 | CD2 | HIS | 1717 | 37.957 | 3.259   | 6.567  | 1.00 | 40.97 |
| ATOM | 1817 | ND1 | HIS | 1717 | 35.789 | 3.142   | 6.825  | 1.00 | 45.02 |
| ATOM | 1818 | CE1 | HIS | 1717 | 36.333 | 2.914   | 8.004  | 1.00 | 44.06 |
| ATOM | 1819 | NE2 | HIS | 1717 | 37.645 | 2.976   | 7.873  | 1.00 | 43.67 |
| ATOM | 1820 | C   | HIS | 1717 | 35.149 | 1.567   | 4.201  | 1.00 | 31.72 |
| ATOM | 1821 | O   | HIS | 1717 | 33.975 | 1.816   | 3.952  | 1.00 | 32.12 |
| ATOM | 1822 | N   | ARG | 1718 | 35.529 | 0.582   | 5.009  | 1.00 | 31.09 |
| ATOM | 1823 | CA  | ARG | 1718 | 34.586 | -0.288  | 5.696  | 1.00 | 32.10 |
| ATOM | 1824 | CB  | ARG | 1718 | 34.531 | -1.664  | 5.024  | 1.00 | 31.61 |
| ATOM | 1825 | CG  | ARG | 1718 | 34.048 | -1.651  | 3.577  | 1.00 | 31.32 |
| ATOM | 1826 | CD  | ARG | 1718 | 32.579 | -1.263  | 3.495  | 1.00 | 29.60 |
| ATOM | 1827 | NE  | ARG | 1718 | 32.036 | -1.320  | 2.129  | 1.00 | 24.72 |
| ATOM | 1828 | CZ  | ARG | 1718 | 32.103 | -0.324  | 1.243  | 1.00 | 22.01 |
| ATOM | 1829 | NH1 | ARG | 1718 | 32.709 | 0.819   | 1.554  | 1.00 | 19.00 |
| ATOM | 1830 | NH2 | ARG | 1718 | 31.463 | -0.444  | 0.083  | 1.00 | 14.18 |
| ATOM | 1831 | C   | ARG | 1718 | 35.042 | -0.438  | 7.164  | 1.00 | 33.81 |
| ATOM | 1832 | O   | ARG | 1718 | 36.234 | -0.596  | 7.446  | 1.00 | 34.62 |
| ATOM | 1833 | N   | MET | 1719 | 34.084 | -0.372  | 8.085  | 1.00 | 33.99 |
| ATOM | 1834 | CA  | MET | 1719 | 34.382 | -0.466  | 9.508  | 1.00 | 32.51 |
| ATOM | 1835 | CB  | MET | 1719 | 33.110 | -0.246  | 10.342 | 1.00 | 33.51 |
| ATOM | 1836 | CG  | MET | 1719 | 32.513 | 1.155   | 10.200 | 1.00 | 33.69 |
| ATOM | 1837 | SD  | MET | 1719 | 31.082 | 1.526   | 11.251 | 1.00 | 37.49 |
| ATOM | 1838 | CE  | MET | 1719 | 29.906 | 0.373   | 10.616 | 1.00 | 37.62 |
| ATOM | 1839 | C   | MET | 1719 | 35.033 | -1.799  | 9.844  | 1.00 | 32.92 |
| ATOM | 1840 | O   | MET | 1719 | 34.900 | -2.772  | 9.098  | 1.00 | 33.67 |
| ATOM | 1841 | N   | ASP | 1720 | 35.776 | -1.825  | 10.945 | 1.00 | 35.49 |
| ATOM | 1842 | CA  | ASP | 1720 | 36.466 | -3.038  | 11.388 | 1.00 | 36.87 |
| ATOM | 1843 | CB  | ASP | 1720 | 37.585 | -2.694  | 12.376 | 1.00 | 41.64 |
| ATOM | 1844 | CG  | ASP | 1720 | 38.688 | -1.859  | 11.754 | 1.00 | 46.44 |
| ATOM | 1845 | OD1 | ASP | 1720 | 38.507 | -1.410  | 10.604 | 1.00 | 52.86 |
| ATOM | 1846 | OD2 | ASP | 1720 | 39.740 | -1.650  | 12.422 | 1.00 | 46.76 |
| ATOM | 1847 | C   | ASP | 1720 | 35.516 | -4.005  | 12.053 | 1.00 | 34.70 |
| ATOM | 1848 | O   | ASP | 1720 | 34.459 | -3.603  | 12.548 | 1.00 | 34.31 |
| ATOM | 1849 | N   | LYS | 1721 | 35.937 | -5.265  | 12.132 | 1.00 | 33.39 |
| ATOM | 1850 | CA  | LYS | 1721 | 35.119 | -6.297  | 12.755 | 1.00 | 32.68 |
| ATOM | 1851 | CB  | LYS | 1721 | 35.692 | -7.690  | 12.500 | 1.00 | 33.55 |
| ATOM | 1852 | CG  | LYS | 1721 | 34.834 | -8.791  | 13.119 | 1.00 | 33.62 |
| ATOM | 1853 | CD  | LYS | 1721 | 35.336 | -10.158 | 12.771 | 1.00 | 35.77 |
| ATOM | 1854 | CE  | LYS | 1721 | 36.082 | -10.747 | 13.931 | 1.00 | 38.73 |
| ATOM | 1855 | NZ  | LYS | 1721 | 36.325 | -12.190 | 13.711 | 1.00 | 43.86 |
| ATOM | 1856 | C   | LYS | 1721 | 35.034 | -6.107  | 14.240 | 1.00 | 34.61 |
| ATOM | 1857 | O   | LYS | 1721 | 36.057 | -5.944  | 14.905 | 1.00 | 37.05 |
| ATOM | 1858 | N   | PRO | 1722 | 33.808 | -6.092  | 14.781 | 1.00 | 36.16 |
| ATOM | 1859 | CD  | PRO | 1722 | 32.518 | -6.062  | 14.066 | 1.00 | 34.73 |
| ATOM | 1860 | CA  | PRO | 1722 | 33.611 | -5.926  | 16.222 | 1.00 | 37.84 |
| ATOM | 1861 | CB  | PRO | 1722 | 32.095 | -6.017  | 16.360 | 1.00 | 37.19 |
| ATOM | 1862 | CG  | PRO | 1722 | 31.607 | -5.448  | 15.073 | 1.00 | 36.00 |
| ATOM | 1863 | C   | PRO | 1722 | 34.266 | -7.109  | 16.950 | 1.00 | 39.95 |
| ATOM | 1864 | O   | PRO | 1722 | 34.340 | -8.218  | 16.406 | 1.00 | 38.82 |
| ATOM | 1865 | N   | SER | 1723 | 34.783 | -6.884  | 18.150 | 1.00 | 42.36 |
| ATOM | 1866 | CA  | SER | 1723 | 35.359 | -7.995  | 18.890 | 1.00 | 45.70 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1867 | CB  | SER | 1723 | 36.170 | -7.511  | 20.093 | 1.00 | 47.50 |
| ATOM | 1868 | OG  | SER | 1723 | 35.341 | -6.964  | 21.100 | 1.00 | 55.28 |
| ATOM | 1869 | C   | SER | 1723 | 34.136 | -8.784  | 19.346 | 1.00 | 46.70 |
| ATOM | 1870 | O   | SER | 1723 | 33.037 | -8.224  | 19.477 | 1.00 | 47.27 |
| ATOM | 1871 | N   | ASN | 1724 | 34.296 | -10.081 | 19.559 | 1.00 | 47.84 |
| ATOM | 1872 | CA  | ASN | 1724 | 33.174 | -10.900 | 19.992 | 1.00 | 51.26 |
| ATOM | 1873 | CB  | ASN | 1724 | 32.620 | -10.361 | 21.330 | 1.00 | 57.15 |
| ATOM | 1874 | CG  | ASN | 1724 | 33.732 | -10.088 | 22.365 | 1.00 | 61.53 |
| ATOM | 1875 | OD1 | ASN | 1724 | 34.565 | -10.955 | 22.646 | 1.00 | 64.13 |
| ATOM | 1876 | ND2 | ASN | 1724 | 33.763 | -8.867  | 22.912 | 1.00 | 61.69 |
| ATOM | 1877 | C   | ASN | 1724 | 32.101 | -10.916 | 18.873 | 1.00 | 50.72 |
| ATOM | 1878 | O   | ASN | 1724 | 30.925 | -10.617 | 19.089 | 1.00 | 52.63 |
| ATOM | 1879 | N   | CYS | 1725 | 32.564 | -11.193 | 17.663 | 1.00 | 48.01 |
| ATOM | 1880 | CA  | CYS | 1725 | 31.719 | -11.295 | 16.478 | 1.00 | 45.16 |
| ATOM | 1881 | CB  | CYS | 1725 | 31.603 | -9.929  | 15.788 | 1.00 | 44.77 |
| ATOM | 1882 | SG  | CYS | 1725 | 30.605 | -9.929  | 14.272 | 1.00 | 40.74 |
| ATOM | 1883 | C   | CYS | 1725 | 32.421 | -12.308 | 15.570 | 1.00 | 41.51 |
| ATOM | 1884 | O   | CYS | 1725 | 33.639 | -12.236 | 15.397 | 1.00 | 42.47 |
| ATOM | 1885 | N   | THR | 1726 | 31.677 | -13.289 | 15.064 | 1.00 | 37.54 |
| ATOM | 1886 | CA  | THR | 1726 | 32.268 | -14.313 | 14.202 | 1.00 | 35.03 |
| ATOM | 1887 | CB  | THR | 1726 | 31.308 | -15.500 | 13.993 | 1.00 | 31.87 |
| ATOM | 1888 | OG1 | THR | 1726 | 30.074 | -15.042 | 13.406 | 1.00 | 32.84 |
| ATOM | 1889 | CG2 | THR | 1726 | 31.017 | -16.160 | 15.306 | 1.00 | 29.78 |
| ATOM | 1890 | C   | THR | 1726 | 32.678 | -13.770 | 12.845 | 1.00 | 34.76 |
| ATOM | 1891 | O   | THR | 1726 | 32.180 | -12.729 | 12.415 | 1.00 | 38.22 |
| ATOM | 1892 | N   | ASN | 1727 | 33.596 | -14.450 | 12.175 | 1.00 | 32.47 |
| ATOM | 1893 | CA  | ASN | 1727 | 34.009 | -14.024 | 10.842 | 1.00 | 34.75 |
| ATOM | 1894 | CB  | ASN | 1727 | 35.167 | -14.872 | 10.308 | 1.00 | 39.77 |
| ATOM | 1895 | CG  | ASN | 1727 | 36.464 | -14.591 | 11.026 | 1.00 | 46.09 |
| ATOM | 1896 | OD1 | ASN | 1727 | 37.019 | -13.495 | 10.933 | 1.00 | 49.54 |
| ATOM | 1897 | ND2 | ASN | 1727 | 36.961 | -15.585 | 11.749 | 1.00 | 50.04 |
| ATOM | 1898 | C   | ASN | 1727 | 32.825 | -14.147 | 9.905  | 1.00 | 33.38 |
| ATOM | 1899 | O   | ASN | 1727 | 32.726 | -13.405 | 8.929  | 1.00 | 34.10 |
| ATOM | 1900 | N   | GLU | 1728 | 31.916 | -15.065 | 10.224 | 1.00 | 32.01 |
| ATOM | 1901 | CA  | GLU | 1728 | 30.707 | -15.310 | 9.418  | 1.00 | 30.41 |
| ATOM | 1902 | CB  | GLU | 1728 | 30.010 | -16.580 | 9.917  | 1.00 | 32.27 |
| ATOM | 1903 | CG  | GLU | 1728 | 28.811 | -17.034 | 9.094  | 1.00 | 31.55 |
| ATOM | 1904 | CD  | GLU | 1728 | 28.251 | -18.369 | 9.577  | 1.00 | 36.38 |
| ATOM | 1905 | OE1 | GLU | 1728 | 28.415 | -18.694 | 10.777 | 1.00 | 38.35 |
| ATOM | 1906 | OE2 | GLU | 1728 | 27.632 | -19.086 | 8.758  | 1.00 | 36.34 |
| ATOM | 1907 | C   | GLU | 1728 | 29.749 | -14.119 | 9.468  | 1.00 | 29.40 |
| ATOM | 1908 | O   | GLU | 1728 | 29.231 | -13.679 | 8.438  | 1.00 | 26.23 |
| ATOM | 1909 | N   | LEU | 1729 | 29.520 | -13.610 | 10.672 | 1.00 | 29.19 |
| ATOM | 1910 | CA  | LEU | 1729 | 28.645 | -12.462 | 10.849 | 1.00 | 30.26 |
| ATOM | 1911 | CB  | LEU | 1729 | 28.215 | -12.343 | 12.310 | 1.00 | 30.74 |
| ATOM | 1912 | CG  | LEU | 1729 | 27.198 | -13.410 | 12.721 | 1.00 | 31.27 |
| ATOM | 1913 | CD1 | LEU | 1729 | 27.013 | -13.377 | 14.226 | 1.00 | 33.65 |
| ATOM | 1914 | CD2 | LEU | 1729 | 25.865 | -13.161 | 12.010 | 1.00 | 26.16 |
| ATOM | 1915 | C   | LEU | 1729 | 29.269 | -11.161 | 10.335 | 1.00 | 28.79 |
| ATOM | 1916 | O   | LEU | 1729 | 28.548 | -10.255 | 9.914  | 1.00 | 30.60 |
| ATOM | 1917 | N   | TYR | 1730 | 30.594 | -11.069 | 10.363 | 1.00 | 26.64 |
| ATOM | 1918 | CA  | TYR | 1730 | 31.281 | -9.881  | 9.844  | 1.00 | 26.47 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 1919 | CB  | TYR | 1730 | 32.742 | -9.869  | 10.298 | 1.00 | 24.31 |
| ATOM | 1920 | CG  | TYR | 1730 | 33.512 | -8.670  | 9.805  | 1.00 | 25.61 |
| ATOM | 1921 | CD1 | TYR | 1730 | 33.029 | -7.373  | 10.016 | 1.00 | 25.68 |
| ATOM | 1922 | CE1 | TYR | 1730 | 33.691 | -6.264  | 9.496  | 1.00 | 23.70 |
| ATOM | 1923 | CD2 | TYR | 1730 | 34.688 | -8.826  | 9.067  | 1.00 | 24.48 |
| ATOM | 1924 | CE2 | TYR | 1730 | 35.361 | -7.719  | 8.537  | 1.00 | 22.61 |
| ATOM | 1925 | CZ  | TYR | 1730 | 34.856 | -6.445  | 8.748  | 1.00 | 24.41 |
| ATOM | 1926 | OH  | TYR | 1730 | 35.476 | -5.354  | 8.176  | 1.00 | 24.37 |
| ATOM | 1927 | C   | TYR | 1730 | 31.186 | -9.902  | 8.301  | 1.00 | 26.06 |
| ATOM | 1928 | O   | TYR | 1730 | 30.981 | -8.881  | 7.651  | 1.00 | 23.68 |
| ATOM | 1929 | N   | MET | 1731 | 31.347 | -11.084 | 7.727  | 1.00 | 26.60 |
| ATOM | 1930 | CA  | MET | 1731 | 31.247 | -11.270 | 6.299  | 1.00 | 29.90 |
| ATOM | 1931 | CB  | MET | 1731 | 31.475 | -12.740 | 5.968  | 1.00 | 38.39 |
| ATOM | 1932 | CG  | MET | 1731 | 31.076 | -13.157 | 4.577  | 1.00 | 52.98 |
| ATOM | 1933 | SD  | MET | 1731 | 31.612 | -14.831 | 4.216  | 1.00 | 69.59 |
| ATOM | 1934 | CE  | MET | 1731 | 32.659 | -14.506 | 2.727  | 1.00 | 66.05 |
| ATOM | 1935 | C   | MET | 1731 | 29.864 | -10.819 | 5.840  | 1.00 | 29.05 |
| ATOM | 1936 | O   | MET | 1731 | 29.720 | -10.194 | 4.791  | 1.00 | 30.94 |
| ATOM | 1937 | N   | MET | 1732 | 28.845 | -11.134 | 6.633  | 1.00 | 29.40 |
| ATOM | 1938 | CA  | MET | 1732 | 27.475 | -10.743 | 6.328  | 1.00 | 26.97 |
| ATOM | 1939 | CB  | MET | 1732 | 26.537 | -11.293 | 7.398  | 1.00 | 25.73 |
| ATOM | 1940 | CG  | MET | 1732 | 25.068 | -10.984 | 7.156  | 1.00 | 26.01 |
| ATOM | 1941 | SD  | MET | 1732 | 23.980 | -11.637 | 8.407  | 1.00 | 26.97 |
| ATOM | 1942 | CE  | MET | 1732 | 23.773 | -13.354 | 7.798  | 1.00 | 21.23 |
| ATOM | 1943 | C   | MET | 1732 | 27.387 | -9.220  | 6.271  | 1.00 | 27.49 |
| ATOM | 1944 | O   | MET | 1732 | 26.778 | -8.661  | 5.361  | 1.00 | 29.17 |
| ATOM | 1945 | N   | MET | 1733 | 27.982 | -8.550  | 7.259  | 1.00 | 27.79 |
| ATOM | 1946 | CA  | MET | 1733 | 28.001 | -7.090  | 7.293  | 1.00 | 27.41 |
| ATOM | 1947 | CB  | MET | 1733 | 28.797 | -6.587  | 8.484  | 1.00 | 28.84 |
| ATOM | 1948 | CG  | MET | 1733 | 28.153 | -6.761  | 9.829  | 1.00 | 32.18 |
| ATOM | 1949 | SD  | MET | 1733 | 29.300 | -6.248  | 11.127 | 1.00 | 32.77 |
| ATOM | 1950 | CE  | MET | 1733 | 28.850 | -7.423  | 12.399 | 1.00 | 33.03 |
| ATOM | 1951 | C   | MET | 1733 | 28.711 | -6.599  | 6.035  | 1.00 | 28.54 |
| ATOM | 1952 | O   | MET | 1733 | 28.250 | -5.680  | 5.357  | 1.00 | 30.69 |
| ATOM | 1953 | N   | ARG | 1734 | 29.865 | -7.194  | 5.751  | 1.00 | 28.59 |
| ATOM | 1954 | CA  | ARG | 1734 | 30.650 | -6.831  | 4.571  | 1.00 | 29.53 |
| ATOM | 1955 | CB  | ARG | 1734 | 31.970 | -7.609  | 4.531  | 1.00 | 28.74 |
| ATOM | 1956 | CG  | ARG | 1734 | 32.944 | -7.245  | 5.638  | 1.00 | 26.75 |
| ATOM | 1957 | CD  | ARG | 1734 | 33.158 | -5.755  | 5.702  | 1.00 | 26.58 |
| ATOM | 1958 | NE  | ARG | 1734 | 33.825 | -5.288  | 4.499  | 1.00 | 34.72 |
| ATOM | 1959 | CZ  | ARG | 1734 | 35.139 | -5.360  | 4.306  | 1.00 | 37.67 |
| ATOM | 1960 | NH1 | ARG | 1734 | 35.927 | -5.867  | 5.251  | 1.00 | 40.46 |
| ATOM | 1961 | NH2 | ARG | 1734 | 35.663 | -4.986  | 3.147  | 1.00 | 38.11 |
| ATOM | 1962 | C   | ARG | 1734 | 29.855 | -7.051  | 3.294  | 1.00 | 28.03 |
| ATOM | 1963 | O   | ARG | 1734 | 29.958 | -6.260  | 2.359  | 1.00 | 27.22 |
| ATOM | 1964 | N   | ASP | 1735 | 29.071 | -8.130  | 3.260  | 1.00 | 27.81 |
| ATOM | 1965 | CA  | ASP | 1735 | 28.212 | -8.436  | 2.103  | 1.00 | 27.27 |
| ATOM | 1966 | CB  | ASP | 1735 | 27.608 | -9.835  | 2.216  | 1.00 | 28.62 |
| ATOM | 1967 | CG  | ASP | 1735 | 28.638 | -10.932 | 2.075  | 1.00 | 30.15 |
| ATOM | 1968 | OD1 | ASP | 1735 | 29.745 | -10.663 | 1.553  | 1.00 | 31.23 |
| ATOM | 1969 | OD2 | ASP | 1735 | 28.354 | -12.070 | 2.501  | 1.00 | 32.00 |
| ATOM | 1970 | C   | ASP | 1735 | 27.099 | -7.400  | 1.971  | 1.00 | 24.78 |



|      |      |     |     |      |        |        |        |      |       |
|------|------|-----|-----|------|--------|--------|--------|------|-------|
| ATOM | 1971 | O   | ASP | 1735 | 26.714 | -7.068 | 0.852  | 1.00 | 24.52 |
| ATOM | 1972 | N   | CYS | 1736 | 26.590 | -6.908 | 3.104  | 1.00 | 24.10 |
| ATOM | 1973 | CA  | CYS | 1736 | 25.530 | -5.871 | 3.140  | 1.00 | 25.20 |
| ATOM | 1974 | CB  | CYS | 1736 | 24.965 | -5.679 | 4.569  | 1.00 | 23.85 |
| ATOM | 1975 | SG  | CYS | 1736 | 23.898 | -7.030 | 5.143  | 1.00 | 18.77 |
| ATOM | 1976 | C   | CYS | 1736 | 26.042 | -4.520 | 2.611  | 1.00 | 23.39 |
| ATOM | 1977 | O   | CYS | 1736 | 25.276 | -3.718 | 2.070  | 1.00 | 21.76 |
| ATOM | 1978 | N   | TRP | 1737 | 27.348 | -4.303 | 2.743  | 1.00 | 23.53 |
| ATOM | 1979 | CA  | TRP | 1737 | 27.988 | -3.072 | 2.302  | 1.00 | 21.57 |
| ATOM | 1980 | CB  | TRP | 1737 | 29.026 | -2.631 | 3.314  | 1.00 | 18.82 |
| ATOM | 1981 | CG  | TRP | 1737 | 28.485 | -2.418 | 4.686  | 1.00 | 19.89 |
| ATOM | 1982 | CD2 | TRP | 1737 | 29.194 | -2.609 | 5.913  | 1.00 | 22.39 |
| ATOM | 1983 | CE2 | TRP | 1737 | 28.329 | -2.213 | 6.959  | 1.00 | 21.78 |
| ATOM | 1984 | CE3 | TRP | 1737 | 30.478 | -3.083 | 6.238  | 1.00 | 23.52 |
| ATOM | 1985 | CD1 | TRP | 1737 | 27.248 | -1.932 | 5.022  | 1.00 | 19.40 |
| ATOM | 1986 | NE1 | TRP | 1737 | 27.147 | -1.805 | 6.383  | 1.00 | 21.52 |
| ATOM | 1987 | CZ2 | TRP | 1737 | 28.705 | -2.270 | 8.319  | 1.00 | 21.85 |
| ATOM | 1988 | CZ3 | TRP | 1737 | 30.857 | -3.134 | 7.583  | 1.00 | 25.30 |
| ATOM | 1989 | CH2 | TRP | 1737 | 29.972 | -2.728 | 8.604  | 1.00 | 26.17 |
| ATOM | 1990 | C   | TRP | 1737 | 28.673 | -3.226 | 0.956  | 1.00 | 24.49 |
| ATOM | 1991 | O   | TRP | 1737 | 29.648 | -2.519 | 0.670  | 1.00 | 25.09 |
| ATOM | 1992 | N   | HIS | 1738 | 28.203 | -4.170 | 0.136  | 1.00 | 25.12 |
| ATOM | 1993 | CA  | HIS | 1738 | 28.808 | -4.341 | -1.172 | 1.00 | 22.90 |
| ATOM | 1994 | CB  | HIS | 1738 | 28.163 | -5.497 | -1.928 | 1.00 | 23.14 |
| ATOM | 1995 | CG  | HIS | 1738 | 29.017 | -6.013 | -3.051 | 1.00 | 23.26 |
| ATOM | 1996 | CD2 | HIS | 1738 | 29.550 | -5.380 | -4.129 | 1.00 | 23.78 |
| ATOM | 1997 | ND1 | HIS | 1738 | 29.492 | -7.308 | -3.104 | 1.00 | 24.91 |
| ATOM | 1998 | CE1 | HIS | 1738 | 30.286 | -7.445 | -4.156 | 1.00 | 25.29 |
| ATOM | 1999 | NE2 | HIS | 1738 | 30.341 | -6.288 | -4.794 | 1.00 | 26.99 |
| ATOM | 2000 | C   | HIS | 1738 | 28.670 | -3.024 | -1.958 | 1.00 | 22.92 |
| ATOM | 2001 | O   | HIS | 1738 | 27.615 | -2.381 | -1.933 | 1.00 | 20.27 |
| ATOM | 2002 | N   | ALA | 1739 | 29.752 | -2.608 | -2.607 | 1.00 | 24.30 |
| ATOM | 2003 | CA  | ALA | 1739 | 29.762 | -1.378 | -3.385 | 1.00 | 23.70 |
| ATOM | 2004 | CB  | ALA | 1739 | 31.079 | -1.234 | -4.076 | 1.00 | 25.24 |
| ATOM | 2005 | C   | ALA | 1739 | 28.645 | -1.391 | -4.416 | 1.00 | 25.37 |
| ATOM | 2006 | O   | ALA | 1739 | 27.955 | -0.391 | -4.606 | 1.00 | 27.86 |
| ATOM | 2007 | N   | VAL | 1740 | 28.507 | -2.521 | -5.102 | 1.00 | 23.97 |
| ATOM | 2008 | CA  | VAL | 1740 | 27.481 | -2.700 | -6.121 | 1.00 | 24.64 |
| ATOM | 2009 | CB  | VAL | 1740 | 27.966 | -3.698 | -7.206 | 1.00 | 26.39 |
| ATOM | 2010 | CG1 | VAL | 1740 | 27.013 | -3.757 | -8.360 | 1.00 | 22.65 |
| ATOM | 2011 | CG2 | VAL | 1740 | 29.308 | -3.260 | -7.720 | 1.00 | 27.43 |
| ATOM | 2012 | C   | VAL | 1740 | 26.170 | -3.209 | -5.481 | 1.00 | 23.97 |
| ATOM | 2013 | O   | VAL | 1740 | 26.126 | -4.347 | -4.978 | 1.00 | 24.14 |
| ATOM | 2014 | N   | PRO | 1741 | 25.090 | -2.397 | -5.545 | 1.00 | 22.77 |
| ATOM | 2015 | CD  | PRO | 1741 | 25.074 | -1.093 | -6.237 | 1.00 | 17.82 |
| ATOM | 2016 | CA  | PRO | 1741 | 23.763 | -2.695 | -4.980 | 1.00 | 23.22 |
| ATOM | 2017 | CB  | PRO | 1741 | 22.891 | -1.554 | -5.526 | 1.00 | 18.19 |
| ATOM | 2018 | CG  | PRO | 1741 | 23.866 | -0.419 | -5.647 | 1.00 | 15.09 |
| ATOM | 2019 | C   | PRO | 1741 | 23.189 | -4.074 | -5.343 | 1.00 | 23.26 |
| ATOM | 2020 | O   | PRO | 1741 | 22.700 | -4.788 | -4.462 | 1.00 | 22.42 |
| ATOM | 2021 | N   | SER | 1742 | 23.335 | -4.473 | -6.615 | 1.00 | 23.49 |
| ATOM | 2022 | CA  | SER | 1742 | 22.826 | -5.754 | -7.119 | 1.00 | 23.17 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2023 | CB  | SER | 1742 | 22.956 | -5.808  | -8.641 | 1.00 | 23.67 |
| ATOM | 2024 | OG  | SER | 1742 | 24.324 | -5.891  | -9.023 | 1.00 | 26.64 |
| ATOM | 2025 | C   | SER | 1742 | 23.524 | -6.984  | -6.545 | 1.00 | 23.09 |
| ATOM | 2026 | O   | SER | 1742 | 22.993 | -8.104  | -6.603 | 1.00 | 21.90 |
| ATOM | 2027 | N   | GLN | 1743 | 24.719 | -6.782  | -5.997 | 1.00 | 23.62 |
| ATOM | 2028 | CA  | GLN | 1743 | 25.466 | -7.895  | -5.416 | 1.00 | 23.26 |
| ATOM | 2029 | CB  | GLN | 1743 | 26.953 | -7.754  | -5.702 | 1.00 | 24.32 |
| ATOM | 2030 | CG  | GLN | 1743 | 27.255 | -7.828  | -7.170 | 1.00 | 23.04 |
| ATOM | 2031 | CD  | GLN | 1743 | 26.684 | -9.076  | -7.810 | 1.00 | 24.83 |
| ATOM | 2032 | OE1 | GLN | 1743 | 27.176 | -10.178 | -7.584 | 1.00 | 21.07 |
| ATOM | 2033 | NE2 | GLN | 1743 | 25.647 | -8.907  | -8.625 | 1.00 | 22.66 |
| ATOM | 2034 | C   | GLN | 1743 | 25.227 | -8.121  | -3.927 | 1.00 | 23.85 |
| ATOM | 2035 | O   | GLN | 1743 | 25.744 | -9.083  | -3.366 | 1.00 | 25.36 |
| ATOM | 2036 | N   | ARG | 1744 | 24.458 | -7.240  | -3.290 | 1.00 | 22.69 |
| ATOM | 2037 | CA  | ARG | 1744 | 24.155 | -7.395  | -1.868 | 1.00 | 21.65 |
| ATOM | 2038 | CB  | ARG | 1744 | 23.635 | -6.087  | -1.277 | 1.00 | 21.22 |
| ATOM | 2039 | CG  | ARG | 1744 | 24.623 | -4.962  | -1.342 | 1.00 | 21.63 |
| ATOM | 2040 | CD  | ARG | 1744 | 24.013 | -3.656  | -0.863 | 1.00 | 19.06 |
| ATOM | 2041 | NE  | ARG | 1744 | 24.869 | -2.563  | -1.318 | 1.00 | 24.44 |
| ATOM | 2042 | CZ  | ARG | 1744 | 24.461 | -1.322  | -1.564 | 1.00 | 22.49 |
| ATOM | 2043 | NH1 | ARG | 1744 | 23.184 | -0.972  | -1.378 | 1.00 | 18.95 |
| ATOM | 2044 | NH2 | ARG | 1744 | 25.337 | -0.438  | -2.034 | 1.00 | 22.19 |
| ATOM | 2045 | C   | ARG | 1744 | 23.095 | -8.470  | -1.712 | 1.00 | 22.45 |
| ATOM | 2046 | O   | ARG | 1744 | 22.363 | -8.772  | -2.654 | 1.00 | 25.62 |
| ATOM | 2047 | N   | PRO | 1745 | 23.065 | -9.139  | -0.559 | 1.00 | 21.78 |
| ATOM | 2048 | CD  | PRO | 1745 | 24.025 | -9.114  | 0.563  | 1.00 | 21.02 |
| ATOM | 2049 | CA  | PRO | 1745 | 22.057 | -10.175 | -0.362 | 1.00 | 20.99 |
| ATOM | 2050 | CB  | PRO | 1745 | 22.532 | -10.879 | 0.919  | 1.00 | 21.12 |
| ATOM | 2051 | CG  | PRO | 1745 | 23.240 | -9.777  | 1.676  | 1.00 | 19.86 |
| ATOM | 2052 | C   | PRO | 1745 | 20.726 | -9.485  | -0.146 | 1.00 | 22.18 |
| ATOM | 2053 | O   | PRO | 1745 | 20.680 | -8.281  | 0.128  | 1.00 | 23.04 |
| ATOM | 2054 | N   | THR | 1746 | 19.646 | -10.236 | -0.297 | 1.00 | 19.31 |
| ATOM | 2055 | CA  | THR | 1746 | 18.335 | -9.689  | -0.085 | 1.00 | 19.12 |
| ATOM | 2056 | CB  | THR | 1746 | 17.307 | -10.334 | -1.045 | 1.00 | 19.86 |
| ATOM | 2057 | OG1 | THR | 1746 | 17.299 | -11.763 | -0.886 | 1.00 | 22.54 |
| ATOM | 2058 | CG2 | THR | 1746 | 17.668 | -10.002 | -2.479 | 1.00 | 22.97 |
| ATOM | 2059 | C   | THR | 1746 | 17.961 | -9.975  | 1.367  | 1.00 | 19.91 |
| ATOM | 2060 | O   | THR | 1746 | 18.676 | -10.711 | 2.058  | 1.00 | 19.93 |
| ATOM | 2061 | N   | PHE | 1747 | 16.884 | -9.381  | 1.855  | 1.00 | 21.80 |
| ATOM | 2062 | CA  | PHE | 1747 | 16.456 | -9.678  | 3.224  | 1.00 | 23.46 |
| ATOM | 2063 | CB  | PHE | 1747 | 15.353 | -8.720  | 3.686  | 1.00 | 21.84 |
| ATOM | 2064 | CG  | PHE | 1747 | 15.872 | -7.368  | 4.082  | 1.00 | 24.84 |
| ATOM | 2065 | CD1 | PHE | 1747 | 16.627 | -7.207  | 5.237  | 1.00 | 22.23 |
| ATOM | 2066 | CD2 | PHE | 1747 | 15.611 | -6.248  | 3.293  | 1.00 | 22.97 |
| ATOM | 2067 | CE1 | PHE | 1747 | 17.124 | -5.944  | 5.598  | 1.00 | 19.42 |
| ATOM | 2068 | CE2 | PHE | 1747 | 16.111 | -4.991  | 3.646  | 1.00 | 17.14 |
| ATOM | 2069 | CZ  | PHE | 1747 | 16.862 | -4.846  | 4.801  | 1.00 | 18.02 |
| ATOM | 2070 | C   | PHE | 1747 | 15.992 | -11.133 | 3.295  | 1.00 | 22.28 |
| ATOM | 2071 | O   | PHE | 1747 | 16.189 | -11.796 | 4.304  | 1.00 | 23.76 |
| ATOM | 2072 | N   | LYS | 1748 | 15.430 | -11.632 | 2.199  | 1.00 | 23.46 |
| ATOM | 2073 | CA  | LYS | 1748 | 14.971 | -13.014 | 2.140  | 1.00 | 25.84 |
| ATOM | 2074 | CB  | LYS | 1748 | 14.344 | -13.327 | 0.782  | 1.00 | 26.89 |

|      |      |     |     |      |        |         |        |      |       |
|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2075 | CG  | LYS | 1748 | 14.061 | -14.793 | 0.583  | 1.00 | 31.07 |
| ATOM | 2076 | CD  | LYS | 1748 | 13.714 | -15.064 | -0.861 | 1.00 | 37.82 |
| ATOM | 2077 | CE  | LYS | 1748 | 13.231 | -16.493 | -1.068 | 1.00 | 44.36 |
| ATOM | 2078 | NZ  | LYS | 1748 | 12.027 | -16.782 | -0.235 | 1.00 | 50.16 |
| ATOM | 2079 | C   | LYS | 1748 | 16.160 | -13.949 | 2.393  | 1.00 | 27.27 |
| ATOM | 2080 | O   | LYS | 1748 | 16.067 | -14.877 | 3.202  | 1.00 | 27.87 |
| ATOM | 2081 | N   | GLN | 1749 | 17.288 | -13.674 | 1.730  | 1.00 | 25.64 |
| ATOM | 2082 | CA  | GLN | 1749 | 18.507 | -14.457 | 1.903  | 1.00 | 24.32 |
| ATOM | 2083 | CB  | GLN | 1749 | 19.608 | -13.938 | 0.983  | 1.00 | 28.87 |
| ATOM | 2084 | CG  | GLN | 1749 | 19.343 | -14.049 | -0.496 | 1.00 | 36.24 |
| ATOM | 2085 | CD  | GLN | 1749 | 20.437 | -13.374 | -1.318 | 1.00 | 41.30 |
| ATOM | 2086 | OE1 | GLN | 1749 | 20.173 | -12.422 | -2.044 | 1.00 | 38.35 |
| ATOM | 2087 | NE2 | GLN | 1749 | 21.683 | -13.861 | -1.190 | 1.00 | 45.38 |
| ATOM | 2088 | C   | GLN | 1749 | 19.002 | -14.310 | 3.346  | 1.00 | 22.89 |
| ATOM | 2089 | O   | GLN | 1749 | 19.302 | -15.305 | 4.008  | 1.00 | 22.55 |
| ATOM | 2090 | N   | LEU | 1750 | 19.114 | -13.064 | 3.813  | 1.00 | 20.89 |
| ATOM | 2091 | CA  | LEU | 1750 | 19.570 | -12.776 | 5.167  | 1.00 | 21.44 |
| ATOM | 2092 | CB  | LEU | 1750 | 19.471 | -11.282 | 5.462  | 1.00 | 19.53 |
| ATOM | 2093 | CG  | LEU | 1750 | 20.432 | -10.400 | 4.663  | 1.00 | 19.14 |
| ATOM | 2094 | CD1 | LEU | 1750 | 20.069 | -8.919  | 4.816  | 1.00 | 14.53 |
| ATOM | 2095 | CD2 | LEU | 1750 | 21.863 | -10.685 | 5.106  | 1.00 | 16.18 |
| ATOM | 2096 | C   | LEU | 1750 | 18.776 | -13.538 | 6.208  | 1.00 | 22.98 |
| ATOM | 2097 | O   | LEU | 1750 | 19.335 | -14.057 | 7.183  | 1.00 | 23.12 |
| ATOM | 2098 | N   | VAL | 1751 | 17.465 | -13.586 | 6.020  | 1.00 | 23.48 |
| ATOM | 2099 | CA  | VAL | 1751 | 16.610 | -14.292 | 6.945  | 1.00 | 23.21 |
| ATOM | 2100 | CB  | VAL | 1751 | 15.132 | -14.075 | 6.590  | 1.00 | 20.94 |
| ATOM | 2101 | CG1 | VAL | 1751 | 14.268 | -15.008 | 7.375  | 1.00 | 21.67 |
| ATOM | 2102 | CG2 | VAL | 1751 | 14.730 | -12.649 | 6.929  | 1.00 | 20.32 |
| ATOM | 2103 | C   | VAL | 1751 | 16.974 | -15.774 | 6.990  | 1.00 | 26.13 |
| ATOM | 2104 | O   | VAL | 1751 | 17.030 | -16.379 | 8.058  | 1.00 | 26.35 |
| ATOM | 2105 | N   | GLU | 1752 | 17.260 | -16.348 | 5.831  | 1.00 | 30.05 |
| ATOM | 2106 | CA  | GLU | 1752 | 17.632 | -17.747 | 5.778  | 1.00 | 32.54 |
| ATOM | 2107 | CB  | GLU | 1752 | 17.695 | -18.221 | 4.338  | 1.00 | 38.54 |
| ATOM | 2108 | CG  | GLU | 1752 | 16.322 | -18.226 | 3.673  | 1.00 | 50.06 |
| ATOM | 2109 | CD  | GLU | 1752 | 16.333 | -18.759 | 2.247  | 1.00 | 56.55 |
| ATOM | 2110 | OE1 | GLU | 1752 | 15.365 | -18.480 | 1.507  | 1.00 | 61.63 |
| ATOM | 2111 | OE2 | GLU | 1752 | 17.303 | -19.466 | 1.875  | 1.00 | 59.57 |
| ATOM | 2112 | C   | GLU | 1752 | 18.974 | -17.965 | 6.486  | 1.00 | 31.62 |
| ATOM | 2113 | O   | GLU | 1752 | 19.113 | -18.858 | 7.322  | 1.00 | 29.63 |
| ATOM | 2114 | N   | ASP | 1753 | 19.938 | -17.103 | 6.193  | 1.00 | 30.74 |
| ATOM | 2115 | CA  | ASP | 1753 | 21.246 | -17.211 | 6.807  | 1.00 | 31.00 |
| ATOM | 2116 | CB  | ASP | 1753 | 22.209 | -16.181 | 6.203  | 1.00 | 31.47 |
| ATOM | 2117 | CG  | ASP | 1753 | 22.445 | -16.390 | 4.710  | 1.00 | 35.82 |
| ATOM | 2118 | OD1 | ASP | 1753 | 22.396 | -17.549 | 4.248  | 1.00 | 36.78 |
| ATOM | 2119 | OD2 | ASP | 1753 | 22.671 | -15.396 | 3.992  | 1.00 | 41.04 |
| ATOM | 2120 | C   | ASP | 1753 | 21.158 | -17.058 | 8.314  | 1.00 | 28.94 |
| ATOM | 2121 | O   | ASP | 1753 | 21.597 | -17.933 | 9.059  | 1.00 | 29.91 |
| ATOM | 2122 | N   | LEU | 1754 | 20.526 | -15.984 | 8.764  | 1.00 | 28.33 |
| ATOM | 2123 | CA  | LEU | 1754 | 20.386 | -15.731 | 10.199 | 1.00 | 26.88 |
| ATOM | 2124 | CB  | LEU | 1754 | 19.724 | -14.372 | 10.457 | 1.00 | 19.82 |
| ATOM | 2125 | CG  | LEU | 1754 | 20.737 | -13.269 | 10.154 | 1.00 | 20.90 |
| ATOM | 2126 | CD1 | LEU | 1754 | 20.074 | -11.886 | 9.995  | 1.00 | 14.83 |

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|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2127 | CD2 | LEU | 1754 | 21.831 | -13.308 | 11.240 | 1.00 | 16.39 |
| ATOM | 2128 | C   | LEU | 1754 | 19.645 | -16.861 | 10.896 | 1.00 | 29.18 |
| ATOM | 2129 | O   | LEU | 1754 | 20.030 | -17.262 | 11.986 | 1.00 | 30.55 |
| ATOM | 2130 | N   | ASP | 1755 | 18.638 | -17.421 | 10.238 | 1.00 | 31.65 |
| ATOM | 2131 | CA  | ASP | 1755 | 17.892 | -18.517 | 10.822 | 1.00 | 31.78 |
| ATOM | 2132 | CB  | ASP | 1755 | 16.723 | -18.900 | 9.928  | 1.00 | 34.57 |
| ATOM | 2133 | CG  | ASP | 1755 | 15.876 | -19.997 | 10.533 | 1.00 | 38.29 |
| ATOM | 2134 | OD1 | ASP | 1755 | 15.410 | -19.844 | 11.677 | 1.00 | 45.68 |
| ATOM | 2135 | OD2 | ASP | 1755 | 15.685 | -21.031 | 9.878  | 1.00 | 43.05 |
| ATOM | 2136 | C   | ASP | 1755 | 18.801 | -19.713 | 11.034 | 1.00 | 33.50 |
| ATOM | 2137 | O   | ASP | 1755 | 18.665 | -20.428 | 12.025 | 1.00 | 34.39 |
| ATOM | 2138 | N   | ARG | 1756 | 19.738 | -19.907 | 10.107 | 1.00 | 35.51 |
| ATOM | 2139 | CA  | ARG | 1756 | 20.700 | -21.004 | 10.169 | 1.00 | 35.33 |
| ATOM | 2140 | CB  | ARG | 1756 | 21.417 | -21.125 | 8.825  | 1.00 | 38.41 |
| ATOM | 2141 | CG  | ARG | 1756 | 22.522 | -22.181 | 8.759  | 1.00 | 40.99 |
| ATOM | 2142 | CD  | ARG | 1756 | 23.181 | -22.223 | 7.376  | 1.00 | 44.60 |
| ATOM | 2143 | NE  | ARG | 1756 | 23.676 | -20.917 | 6.916  | 1.00 | 49.55 |
| ATOM | 2144 | CZ  | ARG | 1756 | 24.795 | -20.338 | 7.349  | 1.00 | 53.56 |
| ATOM | 2145 | NH1 | ARG | 1756 | 25.556 | -20.937 | 8.266  | 1.00 | 53.25 |
| ATOM | 2146 | NH2 | ARG | 1756 | 25.165 | -19.163 | 6.853  | 1.00 | 55.72 |
| ATOM | 2147 | C   | ARG | 1756 | 21.719 | -20.754 | 11.275 | 1.00 | 35.01 |
| ATOM | 2148 | O   | ARG | 1756 | 22.000 | -21.632 | 12.088 | 1.00 | 34.86 |
| ATOM | 2149 | N   | ILE | 1757 | 22.244 | -19.536 | 11.314 | 1.00 | 35.06 |
| ATOM | 2150 | CA  | ILE | 1757 | 23.242 | -19.153 | 12.302 | 1.00 | 35.25 |
| ATOM | 2151 | CB  | ILE | 1757 | 23.847 | -17.753 | 11.984 | 1.00 | 34.59 |
| ATOM | 2152 | CG2 | ILE | 1757 | 24.915 | -17.401 | 12.995 | 1.00 | 32.98 |
| ATOM | 2153 | CG1 | ILE | 1757 | 24.481 | -17.757 | 10.586 | 1.00 | 33.64 |
| ATOM | 2154 | CD1 | ILE | 1757 | 24.812 | -16.387 | 10.032 | 1.00 | 28.79 |
| ATOM | 2155 | C   | ILE | 1757 | 22.673 | -19.182 | 13.716 | 1.00 | 36.74 |
| ATOM | 2156 | O   | ILE | 1757 | 23.283 | -19.764 | 14.601 | 1.00 | 36.60 |
| ATOM | 2157 | N   | VAL | 1758 | 21.489 | -18.608 | 13.917 | 1.00 | 39.16 |
| ATOM | 2158 | CA  | VAL | 1758 | 20.854 | -18.589 | 15.243 | 1.00 | 41.06 |
| ATOM | 2159 | CB  | VAL | 1758 | 19.378 | -18.104 | 15.165 | 1.00 | 38.77 |
| ATOM | 2160 | CG1 | VAL | 1758 | 18.715 | -18.183 | 16.530 | 1.00 | 38.72 |
| ATOM | 2161 | CG2 | VAL | 1758 | 19.309 | -16.670 | 14.651 | 1.00 | 39.49 |
| ATOM | 2162 | C   | VAL | 1758 | 20.885 | -19.986 | 15.850 | 1.00 | 43.92 |
| ATOM | 2163 | O   | VAL | 1758 | 21.403 | -20.182 | 16.954 | 1.00 | 46.90 |
| ATOM | 2164 | N   | ALA | 1759 | 20.370 | -20.957 | 15.098 | 1.00 | 43.96 |
| ATOM | 2165 | CA  | ALA | 1759 | 20.325 | -22.354 | 15.528 | 1.00 | 43.47 |
| ATOM | 2166 | CB  | ALA | 1759 | 19.653 | -23.197 | 14.460 | 1.00 | 42.26 |
| ATOM | 2167 | C   | ALA | 1759 | 21.693 | -22.953 | 15.890 | 1.00 | 44.02 |
| ATOM | 2168 | O   | ALA | 1759 | 21.780 | -23.872 | 16.697 | 1.00 | 45.94 |
| ATOM | 2169 | N   | LEU | 1760 | 22.750 | -22.465 | 15.255 | 1.00 | 45.07 |
| ATOM | 2170 | CA  | LEU | 1760 | 24.095 | -22.949 | 15.514 | 1.00 | 46.72 |
| ATOM | 2171 | CB  | LEU | 1760 | 24.899 | -22.900 | 14.225 | 1.00 | 48.22 |
| ATOM | 2172 | CG  | LEU | 1760 | 24.279 | -23.645 | 13.053 | 1.00 | 51.98 |
| ATOM | 2173 | CD1 | LEU | 1760 | 25.016 | -23.279 | 11.778 | 1.00 | 56.19 |
| ATOM | 2174 | CD2 | LEU | 1760 | 24.327 | -25.136 | 13.313 | 1.00 | 52.82 |
| ATOM | 2175 | C   | LEU | 1760 | 24.811 | -22.118 | 16.578 | 1.00 | 47.59 |
| ATOM | 2176 | O   | LEU | 1760 | 25.935 | -22.432 | 16.986 | 1.00 | 44.63 |
| ATOM | 2177 | N   | THR | 1761 | 24.181 | -21.031 | 17.004 | 1.00 | 49.32 |
| ATOM | 2178 | CA  | THR | 1761 | 24.791 | -20.166 | 17.987 | 1.00 | 50.15 |

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|------|------|-----|-----|------|--------|---------|--------|------|-------|
| ATOM | 2179 | CB  | THR | 1761 | 24.309 | -18.707 | 17.811 | 1.00 | 49.78 |
| ATOM | 2180 | OG1 | THR | 1761 | 24.650 | -18.262 | 16.489 | 1.00 | 49.83 |
| ATOM | 2181 | CG2 | THR | 1761 | 24.997 | -17.793 | 18.809 | 1.00 | 49.37 |
| ATOM | 2182 | C   | THR | 1761 | 24.643 | -20.655 | 19.426 | 1.00 | 51.84 |
| ATOM | 2183 | O   | THR | 1761 | 23.565 | -21.064 | 19.866 | 1.00 | 51.38 |
| ATOM | 2184 | N   | SER | 1762 | 25.761 | -20.622 | 20.143 | 1.00 | 53.45 |
| ATOM | 2185 | CA  | SER | 1762 | 25.835 | -21.042 | 21.533 | 1.00 | 53.79 |
| ATOM | 2186 | CB  | SER | 1762 | 27.301 | -21.039 | 21.969 | 1.00 | 58.33 |
| ATOM | 2187 | OG  | SER | 1762 | 27.502 | -21.759 | 23.173 | 1.00 | 63.27 |
| ATOM | 2188 | C   | SER | 1762 | 25.033 | -20.081 | 22.403 | 1.00 | 50.43 |
| ATOM | 2189 | O   | SER | 1762 | 25.193 | -18.856 | 22.301 | 1.00 | 48.42 |
| ATOM | 2190 | N   | ALA | 461  | 79.680 | 25.808  | 14.502 | 1.00 | 57.40 |
| ATOM | 2191 | CA  | ALA | 461  | 79.609 | 24.651  | 13.610 | 1.00 | 53.47 |
| ATOM | 2192 | CB  | ALA | 461  | 78.307 | 23.875  | 13.860 | 1.00 | 54.34 |
| ATOM | 2193 | C   | ALA | 461  | 79.707 | 25.105  | 12.151 | 1.00 | 49.53 |
| ATOM | 2194 | O   | ALA | 461  | 79.739 | 24.289  | 11.243 | 1.00 | 48.04 |
| ATOM | 2195 | N   | ALA | 462  | 79.814 | 26.417  | 11.957 | 1.00 | 46.57 |
| ATOM | 2196 | CA  | ALA | 462  | 79.919 | 27.014  | 10.634 | 1.00 | 43.66 |
| ATOM | 2197 | CB  | ALA | 462  | 80.034 | 28.532  | 10.750 | 1.00 | 43.87 |
| ATOM | 2198 | C   | ALA | 462  | 81.074 | 26.461  | 9.806  | 1.00 | 39.75 |
| ATOM | 2199 | O   | ALA | 462  | 80.869 | 26.036  | 8.673  | 1.00 | 36.18 |
| ATOM | 2200 | N   | TYR | 463  | 82.279 | 26.449  | 10.383 | 1.00 | 37.82 |
| ATOM | 2201 | CA  | TYR | 463  | 83.477 | 25.959  | 9.686  | 1.00 | 36.88 |
| ATOM | 2202 | CB  | TYR | 463  | 84.615 | 26.968  | 9.765  | 1.00 | 39.12 |
| ATOM | 2203 | CG  | TYR | 463  | 84.372 | 28.176  | 8.894  | 1.00 | 45.68 |
| ATOM | 2204 | CD1 | TYR | 463  | 84.071 | 29.422  | 9.456  | 1.00 | 46.07 |
| ATOM | 2205 | CE1 | TYR | 463  | 83.783 | 30.518  | 8.652  | 1.00 | 48.07 |
| ATOM | 2206 | CD2 | TYR | 463  | 84.384 | 28.064  | 7.501  | 1.00 | 47.80 |
| ATOM | 2207 | CE2 | TYR | 463  | 84.096 | 29.154  | 6.690  | 1.00 | 45.55 |
| ATOM | 2208 | CZ  | TYR | 463  | 83.796 | 30.372  | 7.271  | 1.00 | 47.44 |
| ATOM | 2209 | OH  | TYR | 463  | 83.491 | 31.442  | 6.476  | 1.00 | 49.77 |
| ATOM | 2210 | C   | TYR | 463  | 83.988 | 24.579  | 10.024 | 1.00 | 34.97 |
| ATOM | 2211 | O   | TYR | 463  | 84.605 | 23.947  | 9.175  | 1.00 | 35.48 |
| ATOM | 2212 | N   | GLU | 464  | 83.761 | 24.109  | 11.244 | 1.00 | 34.33 |
| ATOM | 2213 | CA  | GLU | 464  | 84.224 | 22.769  | 11.630 | 1.00 | 36.96 |
| ATOM | 2214 | CB  | GLU | 464  | 85.725 | 22.790  | 11.901 | 1.00 | 41.01 |
| ATOM | 2215 | CG  | GLU | 464  | 86.123 | 23.764  | 12.991 | 1.00 | 45.91 |
| ATOM | 2216 | CD  | GLU | 464  | 87.619 | 24.009  | 13.075 | 1.00 | 53.97 |
| ATOM | 2217 | OE1 | GLU | 464  | 88.013 | 24.922  | 13.835 | 1.00 | 58.84 |
| ATOM | 2218 | OE2 | GLU | 464  | 88.400 | 23.311  | 12.383 | 1.00 | 56.78 |
| ATOM | 2219 | C   | GLU | 464  | 83.517 | 22.294  | 12.875 | 1.00 | 34.98 |
| ATOM | 2220 | O   | GLU | 464  | 83.252 | 23.106  | 13.763 | 1.00 | 35.30 |
| ATOM | 2221 | N   | LEU | 465  | 83.193 | 21.003  | 12.939 | 1.00 | 33.52 |
| ATOM | 2222 | CA  | LEU | 465  | 82.527 | 20.449  | 14.121 | 1.00 | 35.65 |
| ATOM | 2223 | CB  | LEU | 465  | 81.520 | 19.348  | 13.762 | 1.00 | 32.97 |
| ATOM | 2224 | CG  | LEU | 465  | 80.488 | 19.538  | 12.651 | 1.00 | 33.16 |
| ATOM | 2225 | CD1 | LEU | 465  | 79.356 | 18.544  | 12.911 | 1.00 | 27.30 |
| ATOM | 2226 | CD2 | LEU | 465  | 79.983 | 20.981  | 12.596 | 1.00 | 29.96 |
| ATOM | 2227 | C   | LEU | 465  | 83.572 | 19.862  | 15.058 | 1.00 | 38.14 |
| ATOM | 2228 | O   | LEU | 465  | 84.707 | 19.573  | 14.642 | 1.00 | 35.58 |
| ATOM | 2229 | N   | PRO | 466  | 83.215 | 19.684  | 16.338 | 1.00 | 39.91 |
| ATOM | 2230 | CD  | PRO | 466  | 81.929 | 20.073  | 16.942 | 1.00 | 42.38 |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2231 | CA  | PRO | 466 | 84.118 | 19.126 | 17.348 | 1.00 | 40.82 |
| ATOM | 2232 | CB  | PRO | 466 | 83.264 | 19.131 | 18.611 | 1.00 | 41.62 |
| ATOM | 2233 | CG  | PRO | 466 | 82.327 | 20.294 | 18.380 | 1.00 | 45.42 |
| ATOM | 2234 | C   | PRO | 466 | 84.475 | 17.707 | 16.976 | 1.00 | 41.29 |
| ATOM | 2235 | O   | PRO | 466 | 83.681 | 16.996 | 16.361 | 1.00 | 40.64 |
| ATOM | 2236 | N   | GLU | 467 | 85.664 | 17.292 | 17.370 | 1.00 | 43.54 |
| ATOM | 2237 | CA  | GLU | 467 | 86.106 | 15.950 | 17.065 | 1.00 | 47.01 |
| ATOM | 2238 | CB  | GLU | 467 | 87.569 | 15.955 | 16.627 | 1.00 | 50.95 |
| ATOM | 2239 | CG  | GLU | 467 | 88.000 | 14.641 | 15.990 | 1.00 | 59.47 |
| ATOM | 2240 | CD  | GLU | 467 | 89.372 | 14.700 | 15.334 | 1.00 | 63.95 |
| ATOM | 2241 | OE1 | GLU | 467 | 90.123 | 15.688 | 15.538 | 1.00 | 62.08 |
| ATOM | 2242 | OE2 | GLU | 467 | 89.697 | 13.736 | 14.606 | 1.00 | 66.76 |
| ATOM | 2243 | C   | GLU | 467 | 85.892 | 14.993 | 18.233 | 1.00 | 44.81 |
| ATOM | 2244 | O   | GLU | 467 | 85.988 | 15.386 | 19.397 | 1.00 | 45.53 |
| ATOM | 2245 | N   | ASP | 468 | 85.572 | 13.751 | 17.906 | 1.00 | 43.85 |
| ATOM | 2246 | CA  | ASP | 468 | 85.357 | 12.708 | 18.903 | 1.00 | 43.44 |
| ATOM | 2247 | CB  | ASP | 468 | 83.872 | 12.582 | 19.247 | 1.00 | 43.33 |
| ATOM | 2248 | CG  | ASP | 468 | 83.611 | 11.659 | 20.420 | 1.00 | 44.52 |
| ATOM | 2249 | OD1 | ASP | 468 | 82.452 | 11.613 | 20.888 | 1.00 | 48.19 |
| ATOM | 2250 | OD2 | ASP | 468 | 84.557 | 10.985 | 20.877 | 1.00 | 42.43 |
| ATOM | 2251 | C   | ASP | 468 | 85.887 | 11.411 | 18.299 | 1.00 | 42.37 |
| ATOM | 2252 | O   | ASP | 468 | 85.158 | 10.644 | 17.669 | 1.00 | 43.22 |
| ATOM | 2253 | N   | PRO | 469 | 87.194 | 11.182 | 18.433 | 1.00 | 40.72 |
| ATOM | 2254 | CD  | PRO | 469 | 88.167 | 12.102 | 19.045 | 1.00 | 40.30 |
| ATOM | 2255 | CA  | PRO | 469 | 87.861 | 9.992  | 17.909 | 1.00 | 39.00 |
| ATOM | 2256 | CB  | PRO | 469 | 89.228 | 10.078 | 18.570 | 1.00 | 39.03 |
| ATOM | 2257 | CG  | PRO | 469 | 89.484 | 11.564 | 18.551 | 1.00 | 38.11 |
| ATOM | 2258 | C   | PRO | 469 | 87.173 | 8.663  | 18.229 | 1.00 | 39.37 |
| ATOM | 2259 | O   | PRO | 469 | 87.235 | 7.718  | 17.442 | 1.00 | 39.27 |
| ATOM | 2260 | N   | ARG | 470 | 86.497 | 8.596  | 19.371 | 1.00 | 39.93 |
| ATOM | 2261 | CA  | ARG | 470 | 85.814 | 7.374  | 19.770 | 1.00 | 42.32 |
| ATOM | 2262 | CB  | ARG | 470 | 85.030 | 7.614  | 21.062 | 1.00 | 46.12 |
| ATOM | 2263 | CG  | ARG | 470 | 85.766 | 8.370  | 22.149 | 1.00 | 50.76 |
| ATOM | 2264 | CD  | ARG | 470 | 84.839 | 8.592  | 23.344 | 1.00 | 52.76 |
| ATOM | 2265 | NE  | ARG | 470 | 83.649 | 9.362  | 22.991 | 1.00 | 54.47 |
| ATOM | 2266 | CZ  | ARG | 470 | 82.770 | 9.823  | 23.873 | 1.00 | 59.36 |
| ATOM | 2267 | NH1 | ARG | 470 | 82.945 | 9.597  | 25.169 | 1.00 | 61.19 |
| ATOM | 2268 | NH2 | ARG | 470 | 81.712 | 10.508 | 23.455 | 1.00 | 62.88 |
| ATOM | 2269 | C   | ARG | 470 | 84.814 | 6.896  | 18.721 | 1.00 | 42.79 |
| ATOM | 2270 | O   | ARG | 470 | 84.670 | 5.700  | 18.504 | 1.00 | 45.63 |
| ATOM | 2271 | N   | TRP | 471 | 84.139 | 7.844  | 18.078 | 1.00 | 41.98 |
| ATOM | 2272 | CA  | TRP | 471 | 83.100 | 7.542  | 17.093 | 1.00 | 38.34 |
| ATOM | 2273 | CB  | TRP | 471 | 81.844 | 8.307  | 17.451 | 1.00 | 35.68 |
| ATOM | 2274 | CG  | TRP | 471 | 81.195 | 7.794  | 18.670 | 1.00 | 37.42 |
| ATOM | 2275 | CD2 | TRP | 471 | 80.388 | 6.614  | 18.772 | 1.00 | 37.19 |
| ATOM | 2276 | CE2 | TRP | 471 | 79.961 | 6.513  | 20.112 | 1.00 | 36.99 |
| ATOM | 2277 | CE3 | TRP | 471 | 79.987 | 5.626  | 17.855 | 1.00 | 37.80 |
| ATOM | 2278 | CD1 | TRP | 471 | 81.223 | 8.350  | 19.923 | 1.00 | 33.34 |
| ATOM | 2279 | NE1 | TRP | 471 | 80.486 | 7.583  | 20.794 | 1.00 | 34.46 |
| ATOM | 2280 | CZ2 | TRP | 471 | 79.150 | 5.464  | 20.559 | 1.00 | 38.31 |
| ATOM | 2281 | CH3 | TRP | 471 | 79.180 | 4.578  | 18.303 | 1.00 | 36.97 |
| ATOM | 2282 | CH2 | TRP | 471 | 78.772 | 4.506  | 19.638 | 1.00 | 36.14 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2283 | C   | TRP | 471 | 83.409 | 7.830  | 15.641 | 1.00 | 38.26 |
| ATOM | 2284 | O   | TRP | 471 | 82.655 | 7.430  | 14.749 | 1.00 | 38.72 |
| ATOM | 2285 | N   | GLU | 472 | 84.478 | 8.569  | 15.397 | 1.00 | 37.71 |
| ATOM | 2286 | CA  | GLU | 472 | 84.839 | 8.951  | 14.041 | 1.00 | 38.43 |
| ATOM | 2287 | CB  | GLU | 472 | 86.014 | 9.924  | 14.087 | 1.00 | 37.56 |
| ATOM | 2288 | CG  | GLU | 472 | 86.146 | 10.835 | 12.871 | 1.00 | 37.26 |
| ATOM | 2289 | CD  | GLU | 472 | 84.930 | 11.728 | 12.625 | 1.00 | 39.02 |
| ATOM | 2290 | OE1 | GLU | 472 | 84.361 | 12.301 | 13.571 | 1.00 | 40.26 |
| ATOM | 2291 | OE2 | GLU | 472 | 84.568 | 11.879 | 11.445 | 1.00 | 39.35 |
| ATOM | 2292 | C   | GLU | 472 | 85.135 | 7.806  | 13.069 | 1.00 | 38.32 |
| ATOM | 2293 | O   | GLU | 472 | 85.872 | 6.875  | 13.386 | 1.00 | 38.11 |
| ATOM | 2294 | N   | LEU | 473 | 84.535 | 7.884  | 11.883 | 1.00 | 38.44 |
| ATOM | 2295 | CA  | LEU | 473 | 84.775 | 6.893  | 10.848 | 1.00 | 37.19 |
| ATOM | 2296 | CB  | LEU | 473 | 83.505 | 6.112  | 10.511 | 1.00 | 35.38 |
| ATOM | 2297 | CG  | LEU | 473 | 83.805 | 4.910  | 9.599  | 1.00 | 36.49 |
| ATOM | 2298 | CD1 | LEU | 473 | 84.365 | 3.748  | 10.406 | 1.00 | 34.47 |
| ATOM | 2299 | CD2 | LEU | 473 | 82.556 | 4.452  | 8.859  | 1.00 | 37.55 |
| ATOM | 2300 | C   | LEU | 473 | 85.283 | 7.623  | 9.601  | 1.00 | 38.21 |
| ATOM | 2301 | O   | LEU | 473 | 84.696 | 8.631  | 9.187  | 1.00 | 38.52 |
| ATOM | 2302 | N   | PRO | 474 | 86.412 | 7.156  | 9.025  | 1.00 | 37.74 |
| ATOM | 2303 | CD  | PRO | 474 | 87.292 | 6.107  | 9.568  | 1.00 | 36.38 |
| ATOM | 2304 | CA  | PRO | 474 | 87.010 | 7.753  | 7.824  | 1.00 | 36.91 |
| ATOM | 2305 | CB  | PRO | 474 | 88.233 | 6.865  | 7.587  | 1.00 | 34.65 |
| ATOM | 2306 | CG  | PRO | 474 | 88.620 | 6.477  | 8.967  | 1.00 | 32.99 |
| ATOM | 2307 | C   | PRO | 474 | 86.036 | 7.663  | 6.660  | 1.00 | 38.15 |
| ATOM | 2308 | O   | PRO | 474 | 85.536 | 6.578  | 6.362  | 1.00 | 38.24 |
| ATOM | 2309 | N   | ARG | 475 | 85.793 | 8.784  | 5.981  | 1.00 | 38.90 |
| ATOM | 2310 | CA  | ARG | 475 | 84.846 | 8.802  | 4.863  | 1.00 | 41.23 |
| ATOM | 2311 | CB  | ARG | 475 | 84.743 | 10.206 | 4.258  | 1.00 | 38.36 |
| ATOM | 2312 | CG  | ARG | 475 | 84.311 | 11.271 | 5.267  | 1.00 | 35.30 |
| ATOM | 2313 | CD  | ARG | 475 | 84.282 | 12.691 | 4.679  | 1.00 | 35.23 |
| ATOM | 2314 | NE  | ARG | 475 | 83.850 | 13.658 | 5.679  | 1.00 | 27.27 |
| ATOM | 2315 | CZ  | ARG | 475 | 82.585 | 13.859 | 6.011  | 1.00 | 25.77 |
| ATOM | 2316 | NH1 | ARG | 475 | 81.630 | 13.181 | 5.402  | 1.00 | 25.09 |
| ATOM | 2317 | NH2 | ARG | 475 | 82.286 | 14.639 | 7.047  | 1.00 | 25.24 |
| ATOM | 2318 | C   | ARG | 475 | 85.101 | 7.745  | 3.791  | 1.00 | 42.43 |
| ATOM | 2319 | O   | ARG | 475 | 84.160 | 7.212  | 3.204  | 1.00 | 44.06 |
| ATOM | 2320 | N   | ASP | 476 | 86.359 | 7.381  | 3.594  | 1.00 | 44.69 |
| ATOM | 2321 | CA  | ASP | 476 | 86.690 | 6.384  | 2.583  | 1.00 | 48.37 |
| ATOM | 2322 | CB  | ASP | 476 | 88.197 | 6.371  | 2.319  | 1.00 | 52.12 |
| ATOM | 2323 | CG  | ASP | 476 | 88.988 | 5.925  | 3.521  | 1.00 | 56.56 |
| ATOM | 2324 | OD1 | ASP | 476 | 89.299 | 4.718  | 3.613  | 1.00 | 59.72 |
| ATOM | 2325 | OD2 | ASP | 476 | 89.294 | 6.779  | 4.376  | 1.00 | 61.19 |
| ATOM | 2326 | C   | ASP | 476 | 86.210 | 4.988  | 2.973  | 1.00 | 49.50 |
| ATOM | 2327 | O   | ASP | 476 | 86.204 | 4.074  | 2.145  | 1.00 | 51.61 |
| ATOM | 2328 | N   | ARG | 477 | 85.852 | 4.814  | 4.241  | 1.00 | 48.26 |
| ATOM | 2329 | CA  | ARG | 477 | 85.357 | 3.525  | 4.732  | 1.00 | 47.16 |
| ATOM | 2330 | CB  | ARG | 477 | 85.909 | 3.252  | 6.126  | 1.00 | 49.76 |
| ATOM | 2331 | CG  | ARG | 477 | 87.325 | 2.723  | 6.088  | 1.00 | 53.26 |
| ATOM | 2332 | CD  | ARG | 477 | 88.043 | 2.898  | 7.406  | 1.00 | 58.02 |
| ATOM | 2333 | NE  | ARG | 477 | 87.394 | 2.213  | 8.517  | 1.00 | 61.16 |
| ATOM | 2334 | CZ  | ARG | 477 | 87.810 | 2.297  | 9.776  | 1.00 | 63.35 |

|      |      |     |     |     |        |       |        |      |       |
|------|------|-----|-----|-----|--------|-------|--------|------|-------|
| ATOM | 2335 | NH1 | ARG | 477 | 88.875 | 3.032 | 10.081 | 1.00 | 64.92 |
| ATOM | 2336 | NH2 | ARG | 477 | 87.139 | 1.675 | 10.738 | 1.00 | 66.00 |
| ATOM | 2337 | C   | ARG | 477 | 83.822 | 3.445 | 4.740  | 1.00 | 45.38 |
| ATOM | 2338 | O   | ARG | 477 | 83.239 | 2.540 | 5.336  | 1.00 | 43.67 |
| ATOM | 2339 | N   | LEU | 478 | 83.175 | 4.364 | 4.026  | 1.00 | 42.09 |
| ATOM | 2340 | CA  | LEU | 478 | 81.721 | 4.410 | 3.951  | 1.00 | 37.74 |
| ATOM | 2341 | CB  | LEU | 478 | 81.198 | 5.539 | 4.849  | 1.00 | 32.19 |
| ATOM | 2342 | CG  | LEU | 478 | 79.673 | 5.638 | 4.973  | 1.00 | 30.21 |
| ATOM | 2343 | CD1 | LEU | 478 | 79.146 | 4.635 | 5.983  | 1.00 | 22.82 |
| ATOM | 2344 | CD2 | LEU | 478 | 79.313 | 7.035 | 5.422  | 1.00 | 34.82 |
| ATOM | 2345 | C   | LEU | 478 | 81.329 | 4.702 | 2.514  | 1.00 | 38.75 |
| ATOM | 2346 | O   | LEU | 478 | 81.818 | 5.669 | 1.935  | 1.00 | 40.60 |
| ATOM | 2347 | N   | VAL | 479 | 80.477 | 3.863 | 1.925  | 1.00 | 38.78 |
| ATOM | 2348 | CA  | VAL | 479 | 80.020 | 4.058 | 0.544  | 1.00 | 37.97 |
| ATOM | 2349 | CB  | VAL | 479 | 80.353 | 2.845 | -0.360 | 1.00 | 36.36 |
| ATOM | 2350 | CG1 | VAL | 479 | 79.837 | 3.090 | -1.759 | 1.00 | 33.55 |
| ATOM | 2351 | CG2 | VAL | 479 | 81.868 | 2.626 | -0.405 | 1.00 | 33.76 |
| ATOM | 2352 | C   | VAL | 479 | 78.523 | 4.298 | 0.562  | 1.00 | 37.83 |
| ATOM | 2353 | O   | VAL | 479 | 77.750 | 3.383 | 0.820  | 1.00 | 37.70 |
| ATOM | 2354 | N   | LEU | 480 | 78.127 | 5.542 | 0.305  | 1.00 | 39.32 |
| ATOM | 2355 | CA  | LEU | 480 | 76.723 | 5.942 | 0.333  | 1.00 | 38.41 |
| ATOM | 2356 | CB  | LEU | 480 | 76.630 | 7.458 | 0.224  | 1.00 | 38.29 |
| ATOM | 2357 | CG  | LEU | 480 | 77.287 | 8.226 | 1.377  | 1.00 | 37.99 |
| ATOM | 2358 | CD1 | LEU | 480 | 77.098 | 9.730 | 1.159  | 1.00 | 34.00 |
| ATOM | 2359 | CD2 | LEU | 480 | 76.666 | 7.785 | 2.703  | 1.00 | 32.79 |
| ATOM | 2360 | C   | LEU | 480 | 75.893 | 5.287 | -0.753 | 1.00 | 38.24 |
| ATOM | 2361 | O   | LEU | 480 | 76.315 | 5.205 | -1.903 | 1.00 | 39.11 |
| ATOM | 2362 | N   | GLY | 481 | 74.672 | 4.896 | -0.394 | 1.00 | 36.70 |
| ATOM | 2363 | CA  | GLY | 481 | 73.811 | 4.223 | -1.357 | 1.00 | 36.53 |
| ATOM | 2364 | C   | GLY | 481 | 72.417 | 4.782 | -1.524 | 1.00 | 37.61 |
| ATOM | 2365 | O   | GLY | 481 | 72.159 | 5.961 | -1.277 | 1.00 | 40.02 |
| ATOM | 2366 | N   | LYS | 482 | 71.484 | 3.913 | -1.911 | 1.00 | 37.52 |
| ATOM | 2367 | CA  | LYS | 482 | 70.099 | 4.313 | -2.153 | 1.00 | 39.89 |
| ATOM | 2368 | CB  | LYS | 482 | 69.243 | 3.104 | -2.551 | 1.00 | 42.44 |
| ATOM | 2369 | C   | LYS | 482 | 69.447 | 5.028 | -0.984 | 1.00 | 41.25 |
| ATOM | 2370 | O   | LYS | 482 | 69.538 | 4.589 | 0.163  | 1.00 | 42.22 |
| ATOM | 2371 | N   | PRO | 483 | 68.779 | 6.156 | -1.263 | 1.00 | 41.71 |
| ATOM | 2372 | CD  | PRO | 483 | 68.643 | 6.876 | -2.537 | 1.00 | 41.01 |
| ATOM | 2373 | CA  | PRO | 483 | 68.118 | 6.889 | -0.193 | 1.00 | 42.72 |
| ATOM | 2374 | CB  | PRO | 483 | 67.606 | 8.146 | -0.906 | 1.00 | 41.26 |
| ATOM | 2375 | CG  | PRO | 483 | 67.425 | 7.713 | -2.290 | 1.00 | 40.16 |
| ATOM | 2376 | C   | PRO | 483 | 66.999 | 6.061 | 0.429  | 1.00 | 44.69 |
| ATOM | 2377 | O   | PRO | 483 | 66.306 | 5.314 | -0.262 | 1.00 | 45.26 |
| ATOM | 2378 | N   | LEU | 484 | 66.883 | 6.163 | 1.751  | 1.00 | 45.34 |
| ATOM | 2379 | CA  | LEU | 484 | 65.872 | 5.450 | 2.512  | 1.00 | 47.34 |
| ATOM | 2380 | CB  | LEU | 484 | 66.494 | 4.793 | 3.746  | 1.00 | 42.40 |
| ATOM | 2381 | CG  | LEU | 484 | 67.517 | 3.668 | 3.535  | 1.00 | 39.50 |
| ATOM | 2382 | CD1 | LEU | 484 | 68.208 | 3.337 | 4.828  | 1.00 | 33.64 |
| ATOM | 2383 | CD2 | LEU | 484 | 66.861 | 2.419 | 3.003  | 1.00 | 33.44 |
| ATOM | 2384 | C   | LEU | 484 | 64.733 | 6.391 | 2.927  | 1.00 | 52.14 |
| ATOM | 2385 | O   | LEU | 484 | 63.611 | 5.941 | 3.142  | 1.00 | 53.64 |
| ATOM | 2386 | N   | GLY | 485 | 65.013 | 7.697 | 3.025  | 1.00 | 55.25 |



|      |      |     |     |     |        |        |       |      |       |
|------|------|-----|-----|-----|--------|--------|-------|------|-------|
| ATOM | 2387 | CA  | GLY | 485 | 63.982 | 8.653  | 3.427 | 1.00 | 58.76 |
| ATOM | 2388 | C   | GLY | 485 | 64.441 | 10.104 | 3.503 | 1.00 | 60.58 |
| ATOM | 2389 | O   | GLY | 485 | 65.640 | 10.376 | 3.600 | 1.00 | 61.49 |
| ATOM | 2390 | N   | ALA | 486 | 63.490 | 11.032 | 3.489 | 1.00 | 61.46 |
| ATOM | 2391 | CA  | ALA | 486 | 63.791 | 12.458 | 3.545 | 1.00 | 63.24 |
| ATOM | 2392 | CB  | ALA | 486 | 63.847 | 13.035 | 2.126 | 1.00 | 64.42 |
| ATOM | 2393 | C   | ALA | 486 | 62.730 | 13.179 | 4.355 | 1.00 | 63.86 |
| ATOM | 2394 | O   | ALA | 486 | 61.655 | 12.633 | 4.599 | 1.00 | 65.24 |
| ATOM | 2395 | N   | GLY | 487 | 63.022 | 14.404 | 4.768 | 1.00 | 63.89 |
| ATOM | 2396 | CA  | GLY | 487 | 62.054 | 15.158 | 5.538 | 1.00 | 64.30 |
| ATOM | 2397 | C   | GLY | 487 | 62.431 | 16.617 | 5.623 | 1.00 | 65.34 |
| ATOM | 2398 | O   | GLY | 487 | 63.071 | 17.154 | 4.718 | 1.00 | 65.98 |
| ATOM | 2399 | N   | ALA | 488 | 62.023 | 17.259 | 6.711 | 1.00 | 66.16 |
| ATOM | 2400 | CA  | ALA | 488 | 62.317 | 18.666 | 6.934 | 1.00 | 66.71 |
| ATOM | 2401 | CB  | ALA | 488 | 61.647 | 19.132 | 8.219 | 1.00 | 70.05 |
| ATOM | 2402 | C   | ALA | 488 | 63.828 | 18.844 | 7.027 | 1.00 | 66.55 |
| ATOM | 2403 | O   | ALA | 488 | 64.432 | 18.547 | 8.063 | 1.00 | 65.59 |
| ATOM | 2404 | N   | PHE | 489 | 64.430 | 19.228 | 5.904 | 1.00 | 65.54 |
| ATOM | 2405 | CA  | PHE | 489 | 65.875 | 19.457 | 5.807 | 1.00 | 65.40 |
| ATOM | 2406 | CB  | PHE | 489 | 66.244 | 20.775 | 6.498 | 1.00 | 67.06 |
| ATOM | 2407 | C   | PHE | 489 | 66.773 | 18.296 | 6.311 | 1.00 | 64.01 |
| ATOM | 2408 | O   | PHE | 489 | 67.942 | 18.502 | 6.651 | 1.00 | 62.51 |
| ATOM | 2409 | N   | GLY | 490 | 66.234 | 17.075 | 6.288 | 1.00 | 61.41 |
| ATOM | 2410 | CA  | GLY | 490 | 66.974 | 15.901 | 6.724 | 1.00 | 55.89 |
| ATOM | 2411 | C   | GLY | 490 | 66.858 | 14.821 | 5.667 | 1.00 | 53.58 |
| ATOM | 2412 | O   | GLY | 490 | 65.825 | 14.703 | 5.000 | 1.00 | 54.22 |
| ATOM | 2413 | N   | GLN | 491 | 67.899 | 14.006 | 5.543 | 1.00 | 51.23 |
| ATOM | 2414 | CA  | GLN | 491 | 67.966 | 12.934 | 4.556 | 1.00 | 47.90 |
| ATOM | 2415 | CB  | GLN | 491 | 68.823 | 13.445 | 3.387 | 1.00 | 50.09 |
| ATOM | 2416 | CG  | GLN | 491 | 68.979 | 12.529 | 2.183 | 1.00 | 56.77 |
| ATOM | 2417 | CD  | GLN | 491 | 69.945 | 13.115 | 1.161 | 1.00 | 60.83 |
| ATOM | 2418 | OE1 | GLN | 491 | 70.283 | 14.292 | 1.218 | 1.00 | 65.11 |
| ATOM | 2419 | NE2 | GLN | 491 | 70.411 | 12.284 | 0.232 | 1.00 | 63.81 |
| ATOM | 2420 | C   | GLN | 491 | 68.597 | 11.673 | 5.190 | 1.00 | 45.27 |
| ATOM | 2421 | O   | GLN | 491 | 69.507 | 11.758 | 6.014 | 1.00 | 45.41 |
| ATOM | 2422 | N   | VAL | 492 | 68.112 | 10.503 | 4.805 | 1.00 | 41.69 |
| ATOM | 2423 | CA  | VAL | 492 | 68.624 | 9.245  | 5.325 | 1.00 | 39.95 |
| ATOM | 2424 | CB  | VAL | 492 | 67.583 | 8.528  | 6.230 | 1.00 | 41.77 |
| ATOM | 2425 | CG1 | VAL | 492 | 68.117 | 7.168  | 6.701 | 1.00 | 39.86 |
| ATOM | 2426 | CG2 | VAL | 492 | 67.226 | 9.399  | 7.421 | 1.00 | 42.87 |
| ATOM | 2427 | C   | VAL | 492 | 68.911 | 8.348  | 4.126 | 1.00 | 38.86 |
| ATOM | 2428 | O   | VAL | 492 | 68.025 | 8.114  | 3.301 | 1.00 | 37.55 |
| ATOM | 2429 | N   | VAL | 493 | 70.141 | 7.862  | 4.010 | 1.00 | 36.01 |
| ATOM | 2430 | CA  | VAL | 493 | 70.481 | 6.994  | 2.895 | 1.00 | 37.55 |
| ATOM | 2431 | CB  | VAL | 493 | 71.471 | 7.674  | 1.889 | 1.00 | 38.65 |
| ATOM | 2432 | CG1 | VAL | 493 | 71.128 | 9.137  | 1.709 | 1.00 | 37.08 |
| ATOM | 2433 | CG2 | VAL | 493 | 72.929 | 7.498  | 2.318 | 1.00 | 39.03 |
| ATOM | 2434 | C   | VAL | 493 | 71.071 | 5.678  | 3.371 | 1.00 | 38.61 |
| ATOM | 2435 | O   | VAL | 493 | 71.645 | 5.599  | 4.456 | 1.00 | 39.75 |
| ATOM | 2436 | N   | LEU | 494 | 70.899 | 4.637  | 2.572 | 1.00 | 39.68 |
| ATOM | 2437 | CA  | LEU | 494 | 71.460 | 3.345  | 2.910 | 1.00 | 40.98 |
| ATOM | 2438 | CB  | LEU | 494 | 70.748 | 2.241  | 2.123 | 1.00 | 42.14 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2439 | CG  | LEU | 494 | 71.250 | 0.808  | 2.305  | 1.00 | 40.33 |
| ATOM | 2440 | CD1 | LEU | 494 | 71.186 | 0.425  | 3.765  | 1.00 | 39.62 |
| ATOM | 2441 | CD2 | LEU | 494 | 70.411 | -0.117 | 1.459  | 1.00 | 40.75 |
| ATOM | 2442 | C   | LEU | 494 | 72.918 | 3.432  | 2.483  | 1.00 | 40.66 |
| ATOM | 2443 | O   | LEU | 494 | 73.249 | 4.163  | 1.552  | 1.00 | 40.05 |
| ATOM | 2444 | N   | ALA | 495 | 73.798 | 2.725  | 3.169  | 1.00 | 39.74 |
| ATOM | 2445 | CA  | ALA | 495 | 75.202 | 2.768  | 2.820  | 1.00 | 42.06 |
| ATOM | 2446 | CB  | ALA | 495 | 75.858 | 3.999  | 3.468  | 1.00 | 42.91 |
| ATOM | 2447 | C   | ALA | 495 | 75.887 | 1.497  | 3.289  | 1.00 | 43.34 |
| ATOM | 2448 | O   | ALA | 495 | 75.271 | 0.668  | 3.946  | 1.00 | 43.81 |
| ATOM | 2449 | N   | GLU | 496 | 77.140 | 1.314  | 2.880  | 1.00 | 44.40 |
| ATOM | 2450 | CA  | GLU | 496 | 77.910 | 0.154  | 3.297  | 1.00 | 45.12 |
| ATOM | 2451 | CB  | GLU | 496 | 78.282 | -0.722 | 2.106  | 1.00 | 48.62 |
| ATOM | 2452 | CG  | GLU | 496 | 77.062 | -1.206 | 1.346  | 1.00 | 56.98 |
| ATOM | 2453 | CD  | GLU | 496 | 77.316 | -2.476 | 0.567  | 1.00 | 60.32 |
| ATOM | 2454 | OE1 | GLU | 496 | 76.448 | -3.378 | 0.634  | 1.00 | 62.17 |
| ATOM | 2455 | OE2 | GLU | 496 | 78.371 | -2.575 | -0.103 | 1.00 | 60.48 |
| ATOM | 2456 | C   | GLU | 496 | 79.151 | 0.658  | 3.987  | 1.00 | 43.27 |
| ATOM | 2457 | O   | GLU | 496 | 79.957 | 1.366  | 3.387  | 1.00 | 44.49 |
| ATOM | 2458 | N   | ALA | 497 | 79.232 | 0.385  | 5.282  | 1.00 | 43.29 |
| ATOM | 2459 | CA  | ALA | 497 | 80.374 | 0.799  | 6.086  | 1.00 | 44.01 |
| ATOM | 2460 | CB  | ALA | 497 | 79.910 | 1.182  | 7.471  | 1.00 | 42.35 |
| ATOM | 2461 | C   | ALA | 497 | 81.381 | -0.351 | 6.150  | 1.00 | 45.60 |
| ATOM | 2462 | O   | ALA | 497 | 80.997 | -1.512 | 6.107  | 1.00 | 43.35 |
| ATOM | 2463 | N   | ILE | 498 | 82.666 | -0.025 | 6.206  | 1.00 | 48.78 |
| ATOM | 2464 | CA  | ILE | 498 | 83.709 | -1.042 | 6.262  | 1.00 | 49.43 |
| ATOM | 2465 | CB  | ILE | 498 | 84.611 | -0.977 | 5.014  | 1.00 | 50.66 |
| ATOM | 2466 | CG2 | ILE | 498 | 85.681 | -2.054 | 5.082  | 1.00 | 51.85 |
| ATOM | 2467 | CG1 | ILE | 498 | 83.780 | -1.150 | 3.741  | 1.00 | 50.27 |
| ATOM | 2468 | CD1 | ILE | 498 | 83.073 | 0.112  | 3.255  | 1.00 | 54.24 |
| ATOM | 2469 | C   | ILE | 498 | 84.572 | -0.878 | 7.510  | 1.00 | 50.32 |
| ATOM | 2470 | O   | ILE | 498 | 85.055 | 0.219  | 7.801  | 1.00 | 49.08 |
| ATOM | 2471 | N   | GLY | 499 | 84.713 | -1.964 | 8.270  | 1.00 | 51.88 |
| ATOM | 2472 | CA  | GLY | 499 | 85.526 | -1.958 | 9.480  | 1.00 | 55.86 |
| ATOM | 2473 | C   | GLY | 499 | 85.061 | -1.111 | 10.661 | 1.00 | 59.72 |
| ATOM | 2474 | O   | GLY | 499 | 85.885 | -0.545 | 11.393 | 1.00 | 61.66 |
| ATOM | 2475 | N   | LEU | 500 | 83.747 | -1.058 | 10.878 | 1.00 | 59.88 |
| ATOM | 2476 | CA  | LEU | 500 | 83.167 | -0.275 | 11.974 | 1.00 | 58.62 |
| ATOM | 2477 | CB  | LEU | 500 | 81.663 | -0.556 | 12.086 | 1.00 | 57.41 |
| ATOM | 2478 | CG  | LEU | 500 | 80.764 | -0.090 | 10.937 | 1.00 | 55.24 |
| ATOM | 2479 | CD1 | LEU | 500 | 79.331 | -0.536 | 11.168 | 1.00 | 51.91 |
| ATOM | 2480 | CD2 | LEU | 500 | 80.845 | 1.426  | 10.799 | 1.00 | 54.93 |
| ATOM | 2481 | C   | LEU | 500 | 83.849 | -0.565 | 13.306 | 1.00 | 58.51 |
| ATOM | 2482 | O   | LEU | 500 | 84.226 | -1.710 | 13.576 | 1.00 | 60.71 |
| ATOM | 2483 | N   | PRO | 505 | 87.501 | -6.102 | 10.460 | 1.00 | 82.25 |
| ATOM | 2484 | CD  | PRO | 505 | 88.578 | -6.722 | 11.248 | 1.00 | 82.69 |
| ATOM | 2485 | CA  | PRO | 505 | 87.860 | -4.730 | 10.077 | 1.00 | 80.47 |
| ATOM | 2486 | CB  | PRO | 505 | 89.257 | -4.557 | 10.686 | 1.00 | 80.88 |
| ATOM | 2487 | CG  | PRO | 505 | 89.782 | -5.960 | 10.770 | 1.00 | 81.84 |
| ATOM | 2488 | C   | PRO | 505 | 87.850 | -4.508 | 8.567  | 1.00 | 77.40 |
| ATOM | 2489 | O   | PRO | 505 | 88.038 | -3.391 | 8.087  | 1.00 | 76.83 |
| ATOM | 2490 | N   | ASN | 506 | 87.632 | -5.584 | 7.826  | 1.00 | 74.91 |

|      |      |     |     |     |        |        |       |      |       |
|------|------|-----|-----|-----|--------|--------|-------|------|-------|
| ATOM | 2491 | CA  | ASN | 506 | 87.572 | -5.502 | 6.375 | 1.00 | 73.04 |
| ATOM | 2492 | CB  | ASN | 506 | 88.632 | -6.406 | 5.749 | 1.00 | 73.39 |
| ATOM | 2493 | C   | ASN | 506 | 86.180 | -5.938 | 5.929 | 1.00 | 71.75 |
| ATOM | 2494 | O   | ASN | 506 | 85.918 | -6.094 | 4.739 | 1.00 | 71.33 |
| ATOM | 2495 | N   | ARG | 507 | 85.294 | -6.124 | 6.905 | 1.00 | 69.66 |
| ATOM | 2496 | CA  | ARG | 507 | 83.924 | -6.534 | 6.638 | 1.00 | 66.59 |
| ATOM | 2497 | CB  | ARG | 507 | 83.369 | -7.329 | 7.819 | 1.00 | 69.86 |
| ATOM | 2498 | C   | ARG | 507 | 83.048 | -5.321 | 6.409 | 1.00 | 63.59 |
| ATOM | 2499 | O   | ARG | 507 | 83.225 | -4.291 | 7.070 | 1.00 | 64.09 |
| ATOM | 2500 | N   | VAL | 508 | 82.126 | -5.429 | 5.462 | 1.00 | 59.52 |
| ATOM | 2501 | CA  | VAL | 508 | 81.217 | -4.334 | 5.187 | 1.00 | 57.28 |
| ATOM | 2502 | CB  | VAL | 508 | 80.905 | -4.178 | 3.686 | 1.00 | 55.73 |
| ATOM | 2503 | CG1 | VAL | 508 | 82.163 | -3.952 | 2.922 | 1.00 | 57.01 |
| ATOM | 2504 | CG2 | VAL | 508 | 80.184 | -5.390 | 3.149 | 1.00 | 58.06 |
| ATOM | 2505 | C   | VAL | 508 | 79.928 | -4.614 | 5.935 | 1.00 | 57.10 |
| ATOM | 2506 | O   | VAL | 508 | 79.483 | -5.759 | 6.018 | 1.00 | 57.35 |
| ATOM | 2507 | N   | THR | 509 | 79.345 | -3.555 | 6.482 | 1.00 | 55.31 |
| ATOM | 2508 | CA  | THR | 509 | 78.107 | -3.652 | 7.227 | 1.00 | 50.14 |
| ATOM | 2509 | CB  | THR | 509 | 78.329 | -3.192 | 8.686 | 1.00 | 50.91 |
| ATOM | 2510 | OG1 | THR | 509 | 79.476 | -3.851 | 9.227 | 1.00 | 49.20 |
| ATOM | 2511 | CG2 | THR | 509 | 77.123 | -3.524 | 9.559 | 1.00 | 51.96 |
| ATOM | 2512 | C   | THR | 509 | 77.140 | -2.705 | 6.528 | 1.00 | 47.53 |
| ATOM | 2513 | O   | THR | 509 | 77.485 | -1.558 | 6.242 | 1.00 | 47.22 |
| ATOM | 2514 | N   | LYS | 510 | 75.958 | -3.191 | 6.191 | 1.00 | 45.64 |
| ATOM | 2515 | CA  | LYS | 510 | 74.975 | -2.333 | 5.551 | 1.00 | 44.44 |
| ATOM | 2516 | CB  | LYS | 510 | 73.861 | -3.175 | 4.948 | 1.00 | 46.74 |
| ATOM | 2517 | CG  | LYS | 510 | 73.008 | -2.420 | 3.950 | 1.00 | 54.51 |
| ATOM | 2518 | CD  | LYS | 510 | 73.463 | -2.645 | 2.513 | 1.00 | 54.97 |
| ATOM | 2519 | CE  | LYS | 510 | 72.846 | -3.917 | 1.934 | 1.00 | 58.25 |
| ATOM | 2520 | NZ  | LYS | 510 | 73.112 | -5.150 | 2.740 | 1.00 | 58.33 |
| ATOM | 2521 | C   | LYS | 510 | 74.430 | -1.470 | 6.696 | 1.00 | 42.75 |
| ATOM | 2522 | O   | LYS | 510 | 74.053 | -2.006 | 7.742 | 1.00 | 43.14 |
| ATOM | 2523 | N   | VAL | 511 | 74.443 | -0.149 | 6.531 | 1.00 | 38.63 |
| ATOM | 2524 | CA  | VAL | 511 | 73.975 | 0.757  | 7.576 | 1.00 | 34.16 |
| ATOM | 2525 | CB  | VAL | 511 | 75.161 | 1.399  | 8.333 | 1.00 | 35.66 |
| ATOM | 2526 | CG1 | VAL | 511 | 75.922 | 0.340  | 9.100 | 1.00 | 31.46 |
| ATOM | 2527 | CG2 | VAL | 511 | 76.098 | 2.100  | 7.357 | 1.00 | 35.08 |
| ATOM | 2528 | C   | VAL | 511 | 73.116 | 1.873  | 7.024 | 1.00 | 31.58 |
| ATOM | 2529 | O   | VAL | 511 | 72.962 | 1.984  | 5.818 | 1.00 | 33.18 |
| ATOM | 2530 | N   | ALA | 512 | 72.542 | 2.687  | 7.906 | 1.00 | 30.77 |
| ATOM | 2531 | CA  | ALA | 512 | 71.724 | 3.818  | 7.484 | 1.00 | 28.58 |
| ATOM | 2532 | CB  | ALA | 512 | 70.382 | 3.774  | 8.145 | 1.00 | 26.09 |
| ATOM | 2533 | C   | ALA | 512 | 72.487 | 5.075  | 7.905 | 1.00 | 29.94 |
| ATOM | 2534 | O   | ALA | 512 | 72.996 | 5.151  | 9.031 | 1.00 | 29.90 |
| ATOM | 2535 | N   | VAL | 513 | 72.556 | 6.057  | 7.012 | 1.00 | 28.68 |
| ATOM | 2536 | CA  | VAL | 513 | 73.286 | 7.290  | 7.280 | 1.00 | 28.26 |
| ATOM | 2537 | CB  | VAL | 513 | 74.439 | 7.503  | 6.269 | 1.00 | 26.92 |
| ATOM | 2538 | CG1 | VAL | 513 | 75.213 | 8.730  | 6.618 | 1.00 | 25.26 |
| ATOM | 2539 | CG2 | VAL | 513 | 75.353 | 6.308  | 6.238 | 1.00 | 25.10 |
| ATOM | 2540 | C   | VAL | 513 | 72.383 | 8.526  | 7.230 | 1.00 | 29.54 |
| ATOM | 2541 | O   | VAL | 513 | 71.745 | 8.799  | 6.200 | 1.00 | 28.56 |
| ATOM | 2542 | N   | LYS | 514 | 72.304 | 9.228  | 8.359 | 1.00 | 28.94 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2543 | CA  | LYS | 514 | 71.519 | 10.450 | 8.481  | 1.00 | 28.60 |
| ATOM | 2544 | CB  | LYS | 514 | 70.942 | 10.611 | 9.893  | 1.00 | 31.19 |
| ATOM | 2545 | CG  | LYS | 514 | 69.988 | 9.542  | 10.328 | 1.00 | 31.41 |
| ATOM | 2546 | CD  | LYS | 514 | 69.454 | 9.922  | 11.690 | 1.00 | 40.14 |
| ATOM | 2547 | CE  | LYS | 514 | 68.484 | 8.892  | 12.222 | 1.00 | 48.93 |
| ATOM | 2548 | NZ  | LYS | 514 | 67.198 | 8.861  | 11.475 | 1.00 | 57.07 |
| ATOM | 2549 | C   | LYS | 514 | 72.430 | 11.636 | 8.196  | 1.00 | 25.53 |
| ATOM | 2550 | O   | LYS | 514 | 73.544 | 11.714 | 8.722  | 1.00 | 20.42 |
| ATOM | 2551 | N   | MET | 515 | 71.928 | 12.576 | 7.407  | 1.00 | 26.63 |
| ATOM | 2552 | CA  | MET | 515 | 72.676 | 13.762 | 7.008  | 1.00 | 27.59 |
| ATOM | 2553 | CB  | MET | 515 | 73.425 | 13.487 | 5.693  | 1.00 | 28.22 |
| ATOM | 2554 | CG  | MET | 515 | 72.502 | 13.026 | 4.556  | 1.00 | 28.70 |
| ATOM | 2555 | SD  | MET | 515 | 73.377 | 12.418 | 3.113  | 1.00 | 32.30 |
| ATOM | 2556 | CE  | MET | 515 | 73.949 | 10.803 | 3.715  | 1.00 | 24.88 |
| ATOM | 2557 | C   | MET | 515 | 71.683 | 14.880 | 6.779  | 1.00 | 28.41 |
| ATOM | 2558 | O   | MET | 515 | 70.472 | 14.685 | 6.889  | 1.00 | 32.15 |
| ATOM | 2559 | N   | LEU | 516 | 72.202 | 16.056 | 6.466  | 1.00 | 29.12 |
| ATOM | 2560 | CA  | LEU | 516 | 71.383 | 17.220 | 6.180  | 1.00 | 29.98 |
| ATOM | 2561 | CB  | LEU | 516 | 72.110 | 18.512 | 6.593  | 1.00 | 25.32 |
| ATOM | 2562 | CG  | LEU | 516 | 72.455 | 18.767 | 8.067  | 1.00 | 26.60 |
| ATOM | 2563 | CD1 | LEU | 516 | 73.210 | 20.057 | 8.190  | 1.00 | 24.56 |
| ATOM | 2564 | CD2 | LEU | 516 | 71.217 | 18.844 | 8.900  | 1.00 | 22.75 |
| ATOM | 2565 | C   | LEU | 516 | 71.092 | 17.274 | 4.674  | 1.00 | 31.50 |
| ATOM | 2566 | O   | LEU | 516 | 71.763 | 16.636 | 3.873  | 1.00 | 32.97 |
| ATOM | 2567 | N   | LYS | 517 | 70.069 | 18.018 | 4.293  | 1.00 | 33.29 |
| ATOM | 2568 | CA  | LYS | 517 | 69.755 | 18.187 | 2.890  | 1.00 | 32.20 |
| ATOM | 2569 | CB  | LYS | 517 | 68.246 | 18.363 | 2.699  | 1.00 | 36.34 |
| ATOM | 2570 | CG  | LYS | 517 | 67.432 | 17.182 | 3.192  | 1.00 | 43.49 |
| ATOM | 2571 | CD  | LYS | 517 | 66.172 | 16.940 | 2.356  | 1.00 | 53.91 |
| ATOM | 2572 | CE  | LYS | 517 | 65.088 | 17.984 | 2.581  | 1.00 | 58.71 |
| ATOM | 2573 | NZ  | LYS | 517 | 63.902 | 17.740 | 1.704  | 1.00 | 59.37 |
| ATOM | 2574 | C   | LYS | 517 | 70.520 | 19.455 | 2.507  | 1.00 | 31.31 |
| ATOM | 2575 | O   | LYS | 517 | 70.917 | 20.217 | 3.383  | 1.00 | 28.74 |
| ATOM | 2576 | N   | SER | 518 | 70.744 | 19.672 | 1.213  | 1.00 | 32.48 |
| ATOM | 2577 | CA  | SER | 518 | 71.486 | 20.840 | 0.714  | 1.00 | 33.52 |
| ATOM | 2578 | CB  | SER | 518 | 71.611 | 20.772 | -0.809 | 1.00 | 32.98 |
| ATOM | 2579 | OG  | SER | 518 | 70.375 | 20.407 | -1.396 | 1.00 | 36.75 |
| ATOM | 2580 | C   | SER | 518 | 70.896 | 22.189 | 1.110  | 1.00 | 34.62 |
| ATOM | 2581 | O   | SER | 518 | 71.580 | 23.214 | 1.058  | 1.00 | 34.57 |
| ATOM | 2582 | N   | ASP | 519 | 69.624 | 22.193 | 1.485  | 1.00 | 35.47 |
| ATOM | 2583 | CA  | ASP | 519 | 68.943 | 23.422 | 1.885  | 1.00 | 36.10 |
| ATOM | 2584 | CB  | ASP | 519 | 67.529 | 23.480 | 1.268  | 1.00 | 38.11 |
| ATOM | 2585 | CG  | ASP | 519 | 66.668 | 22.258 | 1.608  | 1.00 | 41.64 |
| ATOM | 2586 | OD1 | ASP | 519 | 67.150 | 21.309 | 2.253  | 1.00 | 41.70 |
| ATOM | 2587 | OD2 | ASP | 519 | 65.478 | 22.250 | 1.220  | 1.00 | 49.25 |
| ATOM | 2588 | C   | ASP | 519 | 68.881 | 23.645 | 3.395  | 1.00 | 34.66 |
| ATOM | 2589 | O   | ASP | 519 | 68.266 | 24.602 | 3.860  | 1.00 | 33.39 |
| ATOM | 2590 | N   | ALA | 520 | 69.551 | 22.784 | 4.150  | 1.00 | 33.52 |
| ATOM | 2591 | CA  | ALA | 520 | 69.561 | 22.895 | 5.605  | 1.00 | 32.12 |
| ATOM | 2592 | CB  | ALA | 520 | 70.253 | 21.687 | 6.207  | 1.00 | 32.08 |
| ATOM | 2593 | C   | ALA | 520 | 70.242 | 24.163 | 6.076  | 1.00 | 30.91 |
| ATOM | 2594 | O   | ALA | 520 | 71.014 | 24.778 | 5.331  | 1.00 | 30.57 |

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|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2595 | N   | THR | 521 | 69.943 | 24.555 | 7.311  | 1.00 | 30.80 |
| ATOM | 2596 | CA  | THR | 521 | 70.546 | 25.738 | 7.921  | 1.00 | 32.33 |
| ATOM | 2597 | CB  | THR | 521 | 69.493 | 26.763 | 8.440  | 1.00 | 34.30 |
| ATOM | 2598 | OG1 | THR | 521 | 68.817 | 26.242 | 9.598  | 1.00 | 35.14 |
| ATOM | 2599 | CG2 | THR | 521 | 68.484 | 27.109 | 7.366  | 1.00 | 37.70 |
| ATOM | 2600 | C   | THR | 521 | 71.418 | 25.312 | 9.098  | 1.00 | 33.11 |
| ATOM | 2601 | O   | THR | 521 | 71.518 | 24.125 | 9.426  | 1.00 | 31.39 |
| ATOM | 2602 | N   | GLU | 522 | 72.022 | 26.293 | 9.753  | 1.00 | 34.91 |
| ATOM | 2603 | CA  | GLU | 522 | 72.882 | 26.048 | 10.901 | 1.00 | 39.44 |
| ATOM | 2604 | CB  | GLU | 522 | 73.516 | 27.357 | 11.360 | 1.00 | 46.96 |
| ATOM | 2605 | CG  | GLU | 522 | 74.550 | 27.220 | 12.488 | 1.00 | 59.20 |
| ATOM | 2606 | CD  | GLU | 522 | 75.919 | 26.740 | 12.011 | 1.00 | 64.70 |
| ATOM | 2607 | OE1 | GLU | 522 | 76.910 | 27.478 | 12.219 | 1.00 | 63.87 |
| ATOM | 2608 | OE2 | GLU | 522 | 76.006 | 25.627 | 11.445 | 1.00 | 71.55 |
| ATOM | 2609 | C   | GLU | 522 | 72.083 | 25.428 | 12.044 | 1.00 | 39.61 |
| ATOM | 2610 | O   | GLU | 522 | 72.587 | 24.554 | 12.757 | 1.00 | 36.74 |
| ATOM | 2611 | N   | LYS | 523 | 70.827 | 25.849 | 12.193 | 1.00 | 38.60 |
| ATOM | 2612 | CA  | LYS | 523 | 69.970 | 25.327 | 13.252 | 1.00 | 37.77 |
| ATOM | 2613 | CB  | LYS | 523 | 68.628 | 26.053 | 13.273 | 1.00 | 44.52 |
| ATOM | 2614 | CG  | LYS | 523 | 67.665 | 25.562 | 14.355 | 1.00 | 51.14 |
| ATOM | 2615 | CD  | LYS | 523 | 66.380 | 24.982 | 13.756 | 1.00 | 57.39 |
| ATOM | 2616 | CE  | LYS | 523 | 65.499 | 24.376 | 14.852 | 1.00 | 59.17 |
| ATOM | 2617 | NZ  | LYS | 523 | 64.365 | 23.553 | 14.327 | 1.00 | 62.68 |
| ATOM | 2618 | C   | LYS | 523 | 69.751 | 23.849 | 13.002 | 1.00 | 34.63 |
| ATOM | 2619 | O   | LYS | 523 | 69.817 | 23.041 | 13.931 | 1.00 | 35.00 |
| ATOM | 2620 | N   | ASP | 524 | 69.496 | 23.495 | 11.746 | 1.00 | 31.60 |
| ATOM | 2621 | CA  | ASP | 524 | 69.293 | 22.100 | 11.367 | 1.00 | 29.05 |
| ATOM | 2622 | CB  | ASP | 524 | 69.002 | 21.975 | 9.871  | 1.00 | 29.60 |
| ATOM | 2623 | CG  | ASP | 524 | 67.695 | 22.626 | 9.472  | 1.00 | 31.90 |
| ATOM | 2624 | OD1 | ASP | 524 | 66.666 | 22.368 | 10.130 | 1.00 | 38.83 |
| ATOM | 2625 | OD2 | ASP | 524 | 67.687 | 23.383 | 8.485  | 1.00 | 29.79 |
| ATOM | 2626 | C   | ASP | 524 | 70.558 | 21.317 | 11.696 | 1.00 | 28.02 |
| ATOM | 2627 | O   | ASP | 524 | 70.494 | 20.201 | 12.212 | 1.00 | 28.12 |
| ATOM | 2628 | N   | LEU | 525 | 71.709 | 21.899 | 11.378 | 1.00 | 28.32 |
| ATOM | 2629 | CA  | LEU | 525 | 72.971 | 21.231 | 11.677 | 1.00 | 27.71 |
| ATOM | 2630 | CB  | LEU | 525 | 74.173 | 22.085 | 11.257 | 1.00 | 22.53 |
| ATOM | 2631 | CG  | LEU | 525 | 75.548 | 21.490 | 11.602 | 1.00 | 22.13 |
| ATOM | 2632 | CD1 | LEU | 525 | 75.677 | 20.082 | 11.019 | 1.00 | 19.92 |
| ATOM | 2633 | CD2 | LEU | 525 | 76.673 | 22.401 | 11.147 | 1.00 | 18.60 |
| ATOM | 2634 | C   | LEU | 525 | 73.007 | 20.952 | 13.162 | 1.00 | 27.44 |
| ATOM | 2635 | O   | LEU | 525 | 73.227 | 19.817 | 13.577 | 1.00 | 29.73 |
| ATOM | 2636 | N   | SER | 526 | 72.689 | 21.976 | 13.947 | 1.00 | 29.09 |
| ATOM | 2637 | CA  | SER | 526 | 72.672 | 21.891 | 15.412 | 1.00 | 30.83 |
| ATOM | 2638 | CB  | SER | 526 | 72.222 | 23.230 | 16.006 | 1.00 | 34.25 |
| ATOM | 2639 | OG  | SER | 526 | 71.966 | 23.147 | 17.397 | 1.00 | 40.67 |
| ATOM | 2640 | C   | SER | 526 | 71.765 | 20.777 | 15.931 | 1.00 | 29.32 |
| ATOM | 2641 | O   | SER | 526 | 72.055 | 20.133 | 16.954 | 1.00 | 28.94 |
| ATOM | 2642 | N   | ASP | 527 | 70.644 | 20.587 | 15.242 | 1.00 | 26.54 |
| ATOM | 2643 | CA  | ASP | 527 | 69.681 | 19.558 | 15.601 | 1.00 | 27.00 |
| ATOM | 2644 | CB  | ASP | 527 | 68.392 | 19.798 | 14.829 | 1.00 | 25.91 |
| ATOM | 2645 | CG  | ASP | 527 | 67.640 | 21.052 | 15.290 | 1.00 | 29.22 |
| ATOM | 2646 | OD1 | ASP | 527 | 68.016 | 21.662 | 16.320 | 1.00 | 26.80 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2647 | OD2 | ASP | 527 | 66.660 | 21.425 | 14.605 | 1.00 | 33.85 |
| ATOM | 2648 | C   | ASP | 527 | 70.231 | 18.155 | 15.325 | 1.00 | 28.34 |
| ATOM | 2649 | O   | ASP | 527 | 70.058 | 17.240 | 16.130 | 1.00 | 28.36 |
| ATOM | 2650 | N   | LEU | 528 | 70.884 | 17.982 | 14.177 | 1.00 | 29.50 |
| ATOM | 2651 | CA  | LEU | 528 | 71.448 | 16.680 | 13.830 | 1.00 | 30.48 |
| ATOM | 2652 | CB  | LEU | 528 | 71.915 | 16.651 | 12.366 | 1.00 | 27.89 |
| ATOM | 2653 | CG  | LEU | 528 | 72.443 | 15.305 | 11.832 | 1.00 | 26.48 |
| ATOM | 2654 | CD1 | LEU | 528 | 71.468 | 14.154 | 12.148 | 1.00 | 21.52 |
| ATOM | 2655 | CD2 | LEU | 528 | 72.722 | 15.383 | 10.333 | 1.00 | 20.23 |
| ATOM | 2656 | C   | LEU | 528 | 72.583 | 16.308 | 14.804 | 1.00 | 31.69 |
| ATOM | 2657 | O   | LEU | 528 | 72.688 | 15.145 | 15.222 | 1.00 | 30.09 |
| ATOM | 2658 | N   | ILE | 529 | 73.397 | 17.298 | 15.195 | 1.00 | 30.79 |
| ATOM | 2659 | CA  | ILE | 529 | 74.503 | 17.082 | 16.140 | 1.00 | 28.88 |
| ATOM | 2660 | CB  | ILE | 529 | 75.398 | 18.310 | 16.278 | 1.00 | 25.69 |
| ATOM | 2661 | CG2 | ILE | 529 | 76.541 | 18.007 | 17.217 | 1.00 | 20.54 |
| ATOM | 2662 | CG1 | ILE | 529 | 75.960 | 18.727 | 14.941 | 1.00 | 23.71 |
| ATOM | 2663 | CD1 | ILE | 529 | 76.981 | 19.831 | 15.035 | 1.00 | 24.21 |
| ATOM | 2664 | C   | ILE | 529 | 73.951 | 16.767 | 17.533 | 1.00 | 31.52 |
| ATOM | 2665 | O   | ILE | 529 | 74.439 | 15.850 | 18.213 | 1.00 | 30.66 |
| ATOM | 2666 | N   | SER | 530 | 72.917 | 17.500 | 17.947 | 1.00 | 29.79 |
| ATOM | 2667 | CA  | SER | 530 | 72.315 | 17.257 | 19.244 | 1.00 | 32.03 |
| ATOM | 2668 | CB  | SER | 530 | 71.176 | 18.239 | 19.492 | 1.00 | 38.91 |
| ATOM | 2669 | OG  | SER | 530 | 70.266 | 18.231 | 18.412 | 1.00 | 49.86 |
| ATOM | 2670 | C   | SER | 530 | 71.795 | 15.819 | 19.316 | 1.00 | 30.10 |
| ATOM | 2671 | O   | SER | 530 | 71.921 | 15.154 | 20.353 | 1.00 | 31.31 |
| ATOM | 2672 | N   | GLU | 531 | 71.185 | 15.350 | 18.231 | 1.00 | 27.18 |
| ATOM | 2673 | CA  | GLU | 531 | 70.671 | 13.989 | 18.180 | 1.00 | 27.89 |
| ATOM | 2674 | CB  | GLU | 531 | 69.923 | 13.744 | 16.881 | 1.00 | 31.29 |
| ATOM | 2675 | CG  | GLU | 531 | 69.434 | 12.324 | 16.769 | 1.00 | 30.43 |
| ATOM | 2676 | CD  | GLU | 531 | 68.717 | 12.040 | 15.486 | 1.00 | 30.67 |
| ATOM | 2677 | OE1 | GLU | 531 | 68.293 | 10.892 | 15.317 | 1.00 | 37.79 |
| ATOM | 2678 | OE2 | GLU | 531 | 68.571 | 12.941 | 14.643 | 1.00 | 34.20 |
| ATOM | 2679 | C   | GLU | 531 | 71.765 | 12.929 | 18.348 | 1.00 | 26.67 |
| ATOM | 2680 | O   | GLU | 531 | 71.604 | 11.986 | 19.119 | 1.00 | 24.33 |
| ATOM | 2681 | N   | MET | 532 | 72.851 | 13.074 | 17.595 | 1.00 | 28.93 |
| ATOM | 2682 | CA  | MET | 532 | 74.000 | 12.156 | 17.644 | 1.00 | 28.35 |
| ATOM | 2683 | CB  | MET | 532 | 75.073 | 12.637 | 16.659 | 1.00 | 29.48 |
| ATOM | 2684 | CG  | MET | 532 | 76.458 | 12.034 | 16.827 | 1.00 | 25.84 |
| ATOM | 2685 | SD  | MET | 532 | 77.650 | 12.692 | 15.582 | 1.00 | 30.60 |
| ATOM | 2686 | CE  | MET | 532 | 77.831 | 14.373 | 16.151 | 1.00 | 20.10 |
| ATOM | 2687 | C   | MET | 532 | 74.571 | 12.120 | 19.057 | 1.00 | 29.06 |
| ATOM | 2688 | O   | MET | 532 | 74.876 | 11.053 | 19.589 | 1.00 | 28.22 |
| ATOM | 2689 | N   | GLU | 533 | 74.640 | 13.289 | 19.688 | 1.00 | 28.61 |
| ATOM | 2690 | CA  | GLU | 533 | 75.150 | 13.388 | 21.041 | 1.00 | 28.40 |
| ATOM | 2691 | CB  | GLU | 533 | 75.340 | 14.846 | 21.429 | 1.00 | 29.34 |
| ATOM | 2692 | CG  | GLU | 533 | 76.449 | 15.534 | 20.640 | 1.00 | 31.87 |
| ATOM | 2693 | CD  | GLU | 533 | 77.822 | 14.923 | 20.892 | 1.00 | 35.10 |
| ATOM | 2694 | OE1 | GLU | 533 | 78.242 | 14.831 | 22.067 | 1.00 | 37.36 |
| ATOM | 2695 | OE2 | GLU | 533 | 78.490 | 14.543 | 19.913 | 1.00 | 37.71 |
| ATOM | 2696 | C   | GLU | 533 | 74.211 | 12.684 | 22.023 | 1.00 | 31.03 |
| ATOM | 2697 | O   | GLU | 533 | 74.651 | 11.936 | 22.906 | 1.00 | 30.76 |
| ATOM | 2698 | N   | MET | 534 | 72.909 | 12.902 | 21.860 | 1.00 | 31.71 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2699 | CA  | MET | 534 | 71.940 | 12.256 | 22.727 | 1.00 | 30.58 |
| ATOM | 2700 | CB  | MET | 534 | 70.510 | 12.620 | 22.315 | 1.00 | 33.53 |
| ATOM | 2701 | CG  | MET | 534 | 69.538 | 12.624 | 23.509 | 0.50 | 32.45 |
| ATOM | 2702 | SD  | MET | 534 | 67.778 | 12.682 | 23.150 | 0.50 | 30.95 |
| ATOM | 2703 | CE  | MET | 534 | 67.523 | 14.422 | 22.895 | 0.50 | 30.50 |
| ATOM | 2704 | C   | MET | 534 | 72.158 | 10.752 | 22.616 | 1.00 | 28.44 |
| ATOM | 2705 | O   | MET | 534 | 72.304 | 10.077 | 23.614 | 1.00 | 27.63 |
| ATOM | 2706 | N   | MET | 535 | 72.216 | 10.232 | 21.395 | 1.00 | 30.00 |
| ATOM | 2707 | CA  | MET | 535 | 72.448 | 8.800  | 21.176 | 1.00 | 29.38 |
| ATOM | 2708 | CB  | MET | 535 | 72.626 | 8.483  | 19.690 | 1.00 | 25.41 |
| ATOM | 2709 | CG  | MET | 535 | 71.395 | 8.753  | 18.893 | 1.00 | 25.06 |
| ATOM | 2710 | SD  | MET | 535 | 71.468 | 7.917  | 17.344 | 1.00 | 27.17 |
| ATOM | 2711 | CE  | MET | 535 | 71.439 | 9.227  | 16.247 | 1.00 | 33.70 |
| ATOM | 2712 | C   | MET | 535 | 73.675 | 8.345  | 21.938 | 1.00 | 30.77 |
| ATOM | 2713 | O   | MET | 535 | 73.681 | 7.254  | 22.534 | 1.00 | 27.49 |
| ATOM | 2714 | N   | LYS | 536 | 74.710 | 9.183  | 21.916 | 1.00 | 32.72 |
| ATOM | 2715 | CA  | LYS | 536 | 75.937 | 8.889  | 22.649 | 1.00 | 34.05 |
| ATOM | 2716 | CB  | LYS | 536 | 76.995 | 9.964  | 22.401 | 1.00 | 32.69 |
| ATOM | 2717 | CG  | LYS | 536 | 77.719 | 9.838  | 21.073 | 1.00 | 28.00 |
| ATOM | 2718 | CD  | LYS | 536 | 78.732 | 10.956 | 20.941 | 1.00 | 29.61 |
| ATOM | 2719 | CE  | LYS | 536 | 79.242 | 11.124 | 19.514 | 1.00 | 26.58 |
| ATOM | 2720 | NZ  | LYS | 536 | 80.020 | 12.389 | 19.460 | 1.00 | 22.22 |
| ATOM | 2721 | C   | LYS | 536 | 75.652 | 8.769  | 24.145 | 1.00 | 34.80 |
| ATOM | 2722 | O   | LYS | 536 | 76.004 | 7.763  | 24.750 | 1.00 | 34.44 |
| ATOM | 2723 | N   | MET | 537 | 74.958 | 9.749  | 24.716 | 1.00 | 34.66 |
| ATOM | 2724 | CA  | MET | 537 | 74.634 | 9.724  | 26.131 | 1.00 | 37.25 |
| ATOM | 2725 | CB  | MET | 537 | 73.951 | 11.034 | 26.549 | 1.00 | 46.08 |
| ATOM | 2726 | CG  | MET | 537 | 74.862 | 12.272 | 26.619 | 1.00 | 57.95 |
| ATOM | 2727 | SD  | MET | 537 | 76.159 | 12.203 | 27.919 | 1.00 | 66.50 |
| ATOM | 2728 | CE  | MET | 537 | 75.287 | 12.873 | 29.377 | 1.00 | 64.52 |
| ATOM | 2729 | C   | MET | 537 | 73.749 | 8.537  | 26.523 | 1.00 | 36.05 |
| ATOM | 2730 | O   | MET | 537 | 74.021 | 7.865  | 27.514 | 1.00 | 36.71 |
| ATOM | 2731 | N   | ILE | 538 | 72.730 | 8.255  | 25.719 | 1.00 | 33.77 |
| ATOM | 2732 | CA  | ILE | 538 | 71.804 | 7.160  | 26.007 | 1.00 | 30.52 |
| ATOM | 2733 | CB  | ILE | 538 | 70.616 | 7.172  | 25.012 | 1.00 | 28.15 |
| ATOM | 2734 | CG2 | ILE | 538 | 69.780 | 5.899  | 25.122 | 1.00 | 26.08 |
| ATOM | 2735 | CG1 | ILE | 538 | 69.729 | 8.377  | 25.289 | 1.00 | 26.24 |
| ATOM | 2736 | CD1 | ILE | 538 | 68.644 | 8.558  | 24.256 | 1.00 | 26.87 |
| ATOM | 2737 | C   | ILE | 538 | 72.399 | 5.750  | 26.100 | 1.00 | 30.05 |
| ATOM | 2738 | O   | ILE | 538 | 71.984 | 4.950  | 26.941 | 1.00 | 31.57 |
| ATOM | 2739 | N   | GLY | 539 | 73.320 | 5.424  | 25.211 | 1.00 | 30.34 |
| ATOM | 2740 | CA  | GLY | 539 | 73.910 | 4.103  | 25.249 | 1.00 | 28.22 |
| ATOM | 2741 | C   | GLY | 539 | 73.158 | 3.094  | 24.408 | 1.00 | 31.25 |
| ATOM | 2742 | O   | GLY | 539 | 72.050 | 3.359  | 23.935 | 1.00 | 32.88 |
| ATOM | 2743 | N   | LYS | 540 | 73.781 | 1.933  | 24.221 | 1.00 | 31.96 |
| ATOM | 2744 | CA  | LYS | 540 | 73.222 | 0.845  | 23.416 | 1.00 | 33.40 |
| ATOM | 2745 | CB  | LYS | 540 | 74.342 | -0.023 | 22.878 | 1.00 | 31.53 |
| ATOM | 2746 | CG  | LYS | 540 | 75.177 | 0.645  | 21.846 | 1.00 | 37.05 |
| ATOM | 2747 | CD  | LYS | 540 | 76.273 | -0.266 | 21.361 | 1.00 | 40.15 |
| ATOM | 2748 | CE  | LYS | 540 | 77.143 | 0.480  | 20.363 | 1.00 | 46.84 |
| ATOM | 2749 | NZ  | LYS | 540 | 76.374 | 0.920  | 19.152 | 1.00 | 48.60 |
| ATOM | 2750 | C   | LYS | 540 | 72.183 | -0.090 | 24.023 | 1.00 | 36.22 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2751 | O   | LYS | 540 | 72.237 | -0.430 | 25.215 | 1.00 | 40.10 |
| ATOM | 2752 | N   | HIS | 541 | 71.254 | -0.521 | 23.175 | 1.00 | 34.86 |
| ATOM | 2753 | CA  | HIS | 541 | 70.223 | -1.486 | 23.535 | 1.00 | 33.96 |
| ATOM | 2754 | CB  | HIS | 541 | 69.064 | -0.860 | 24.293 | 1.00 | 31.57 |
| ATOM | 2755 | CG  | HIS | 541 | 68.127 | -1.862 | 24.890 | 1.00 | 32.28 |
| ATOM | 2756 | CD2 | HIS | 541 | 68.127 | -2.482 | 26.093 | 1.00 | 32.39 |
| ATOM | 2757 | ND1 | HIS | 541 | 67.086 | -2.411 | 24.177 | 1.00 | 30.10 |
| ATOM | 2758 | CE1 | HIS | 541 | 66.489 | -3.329 | 24.911 | 1.00 | 33.35 |
| ATOM | 2759 | NE2 | HIS | 541 | 67.096 | -3.384 | 26.081 | 1.00 | 30.46 |
| ATOM | 2760 | C   | HIS | 541 | 69.720 | -2.206 | 22.275 | 1.00 | 35.33 |
| ATOM | 2761 | O   | HIS | 541 | 69.648 | -1.614 | 21.200 | 1.00 | 34.87 |
| ATOM | 2762 | N   | LYS | 542 | 69.348 | -3.478 | 22.430 | 1.00 | 35.42 |
| ATOM | 2763 | CA  | LYS | 542 | 68.908 | -4.311 | 21.306 | 1.00 | 32.02 |
| ATOM | 2764 | CB  | LYS | 542 | 68.715 | -5.766 | 21.753 | 1.00 | 30.96 |
| ATOM | 2765 | C   | LYS | 542 | 67.652 | -3.848 | 20.614 | 1.00 | 30.02 |
| ATOM | 2766 | O   | LYS | 542 | 67.474 | -4.058 | 19.417 | 1.00 | 29.10 |
| ATOM | 2767 | N   | ASN | 543 | 66.778 | -3.212 | 21.369 | 1.00 | 28.54 |
| ATOM | 2768 | CA  | ASN | 543 | 65.529 | -2.754 | 20.803 | 1.00 | 28.20 |
| ATOM | 2769 | CB  | ASN | 543 | 64.372 | -3.241 | 21.660 | 1.00 | 29.73 |
| ATOM | 2770 | CG  | ASN | 543 | 64.387 | -4.739 | 21.840 | 1.00 | 30.74 |
| ATOM | 2771 | OD1 | ASN | 543 | 64.732 | -5.242 | 22.909 | 1.00 | 32.96 |
| ATOM | 2772 | ND2 | ASN | 543 | 64.053 | -5.462 | 20.787 | 1.00 | 29.58 |
| ATOM | 2773 | C   | ASN | 543 | 65.426 | -1.257 | 20.529 | 1.00 | 28.06 |
| ATOM | 2774 | O   | ASN | 543 | 64.342 | -0.679 | 20.647 | 1.00 | 28.86 |
| ATOM | 2775 | N   | ILE | 544 | 66.546 | -0.635 | 20.168 | 1.00 | 26.70 |
| ATOM | 2776 | CA  | ILE | 544 | 66.582 | 0.794  | 19.833 | 1.00 | 26.81 |
| ATOM | 2777 | CB  | ILE | 544 | 67.052 | 1.721  | 21.019 | 1.00 | 24.75 |
| ATOM | 2778 | CG2 | ILE | 544 | 66.338 | 1.353  | 22.306 | 1.00 | 20.02 |
| ATOM | 2779 | CG1 | ILE | 544 | 68.568 | 1.614  | 21.234 | 1.00 | 23.73 |
| ATOM | 2780 | CD1 | ILE | 544 | 69.105 | 2.531  | 22.332 | 1.00 | 21.64 |
| ATOM | 2781 | C   | ILE | 544 | 67.582 | 0.901  | 18.680 | 1.00 | 27.95 |
| ATOM | 2782 | O   | ILE | 544 | 68.388 | -0.008 | 18.480 | 1.00 | 26.80 |
| ATOM | 2783 | N   | ILE | 545 | 67.449 | 1.940  | 17.849 | 1.00 | 29.22 |
| ATOM | 2784 | CA  | ILE | 545 | 68.376 | 2.163  | 16.745 | 1.00 | 27.14 |
| ATOM | 2785 | CB  | ILE | 545 | 67.824 | 3.164  | 15.709 | 1.00 | 26.10 |
| ATOM | 2786 | CG2 | ILE | 545 | 68.920 | 3.556  | 14.731 | 1.00 | 24.70 |
| ATOM | 2787 | CG1 | ILE | 545 | 66.625 | 2.568  | 14.955 | 1.00 | 23.78 |
| ATOM | 2788 | CD1 | ILE | 545 | 66.988 | 1.326  | 14.117 | 1.00 | 22.15 |
| ATOM | 2789 | C   | ILE | 545 | 69.631 | 2.718  | 17.401 | 1.00 | 28.14 |
| ATOM | 2790 | O   | ILE | 545 | 69.586 | 3.752  | 18.068 | 1.00 | 28.21 |
| ATOM | 2791 | N   | ASN | 546 | 70.740 | 2.011  | 17.221 | 1.00 | 28.40 |
| ATOM | 2792 | CA  | ASN | 546 | 72.004 | 2.382  | 17.822 | 1.00 | 28.49 |
| ATOM | 2793 | CB  | ASN | 546 | 72.709 | 1.122  | 18.345 | 1.00 | 27.05 |
| ATOM | 2794 | CG  | ASN | 546 | 71.956 | 0.463  | 19.470 | 1.00 | 27.29 |
| ATOM | 2795 | OD1 | ASN | 546 | 71.793 | 1.031  | 20.540 | 1.00 | 29.92 |
| ATOM | 2796 | ND2 | ASN | 546 | 71.472 | -0.740 | 19.235 | 1.00 | 24.63 |
| ATOM | 2797 | C   | ASN | 546 | 72.982 | 3.124  | 16.941 | 1.00 | 28.39 |
| ATOM | 2798 | O   | ASN | 546 | 73.045 | 2.894  | 15.732 | 1.00 | 29.62 |
| ATOM | 2799 | N   | LEU | 547 | 73.774 | 3.982  | 17.579 | 1.00 | 29.91 |
| ATOM | 2800 | CA  | LEU | 547 | 74.828 | 4.750  | 16.925 | 1.00 | 30.68 |
| ATOM | 2801 | CB  | LEU | 547 | 75.297 | 5.898  | 17.837 | 1.00 | 25.28 |
| ATOM | 2802 | CG  | LEU | 547 | 76.367 | 6.828  | 17.267 | 1.00 | 24.81 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2803 | CD1 | LEU | 547 | 75.868 | 7.524  | 15.990 | 1.00 | 22.25 |
| ATOM | 2804 | CD2 | LEU | 547 | 76.716 | 7.853  | 18.313 | 1.00 | 24.17 |
| ATOM | 2805 | C   | LEU | 547 | 76.016 | 3.812  | 16.629 | 1.00 | 31.67 |
| ATOM | 2806 | O   | LEU | 547 | 76.481 | 3.090  | 17.509 | 1.00 | 31.34 |
| ATOM | 2807 | N   | LEU | 548 | 76.475 | 3.823  | 15.380 | 1.00 | 30.60 |
| ATOM | 2808 | CA  | LEU | 548 | 77.594 | 2.995  | 14.955 | 1.00 | 29.31 |
| ATOM | 2809 | CB  | LEU | 548 | 77.197 | 2.165  | 13.729 | 1.00 | 25.94 |
| ATOM | 2810 | CG  | LEU | 548 | 75.968 | 1.247  | 13.883 | 1.00 | 28.78 |
| ATOM | 2811 | CD1 | LEU | 548 | 75.848 | 0.360  | 12.659 | 1.00 | 27.14 |
| ATOM | 2812 | CD2 | LEU | 548 | 76.049 | 0.392  | 15.149 | 1.00 | 23.72 |
| ATOM | 2813 | C   | LEU | 548 | 78.850 | 3.821  | 14.644 | 1.00 | 31.60 |
| ATOM | 2814 | O   | LEU | 548 | 79.967 | 3.330  | 14.753 | 1.00 | 32.65 |
| ATOM | 2815 | N   | GLY | 549 | 78.665 | 5.076  | 14.248 | 1.00 | 32.22 |
| ATOM | 2816 | CA  | GLY | 549 | 79.795 | 5.928  | 13.937 | 1.00 | 31.40 |
| ATOM | 2817 | C   | GLY | 549 | 79.344 | 7.267  | 13.391 | 1.00 | 30.78 |
| ATOM | 2818 | O   | GLY | 549 | 78.140 | 7.536  | 13.291 | 1.00 | 29.84 |
| ATOM | 2819 | N   | ALA | 550 | 80.320 | 8.099  | 13.045 | 1.00 | 31.88 |
| ATOM | 2820 | CA  | ALA | 550 | 80.073 | 9.416  | 12.485 | 1.00 | 30.14 |
| ATOM | 2821 | CB  | ALA | 550 | 79.634 | 10.382 | 13.590 | 1.00 | 31.08 |
| ATOM | 2822 | C   | ALA | 550 | 81.291 | 9.978  | 11.742 | 1.00 | 28.78 |
| ATOM | 2823 | O   | ALA | 550 | 82.447 | 9.705  | 12.102 | 1.00 | 26.39 |
| ATOM | 2824 | N   | CYS | 551 | 81.011 | 10.690 | 10.651 | 1.00 | 28.48 |
| ATOM | 2825 | CA  | CYS | 551 | 82.012 | 11.391 | 9.846  | 1.00 | 23.69 |
| ATOM | 2826 | CB  | CYS | 551 | 81.825 | 11.128 | 8.352  | 1.00 | 24.18 |
| ATOM | 2827 | SG  | CYS | 551 | 81.870 | 9.395  | 7.840  | 1.00 | 28.40 |
| ATOM | 2828 | C   | CYS | 551 | 81.612 | 12.847 | 10.127 | 1.00 | 20.99 |
| ATOM | 2829 | O   | CYS | 551 | 80.561 | 13.282 | 9.684  | 1.00 | 22.11 |
| ATOM | 2830 | N   | THR | 552 | 82.357 | 13.524 | 10.996 | 1.00 | 20.18 |
| ATOM | 2831 | CA  | THR | 552 | 82.073 | 14.914 | 11.349 | 1.00 | 22.79 |
| ATOM | 2832 | CB  | THR | 552 | 82.090 | 15.080 | 12.874 | 1.00 | 23.16 |
| ATOM | 2833 | OG1 | THR | 552 | 83.408 | 14.803 | 13.363 | 1.00 | 23.52 |
| ATOM | 2834 | CG2 | THR | 552 | 81.125 | 14.112 | 13.529 | 1.00 | 25.31 |
| ATOM | 2835 | C   | THR | 552 | 83.138 | 15.886 | 10.824 | 1.00 | 24.74 |
| ATOM | 2836 | O   | THR | 552 | 82.939 | 17.103 | 10.782 | 1.00 | 22.75 |
| ATOM | 2837 | N   | GLN | 553 | 84.276 | 15.334 | 10.431 | 1.00 | 26.82 |
| ATOM | 2838 | CA  | GLN | 553 | 85.387 | 16.153 | 9.980  | 1.00 | 26.99 |
| ATOM | 2839 | CB  | GLN | 553 | 86.686 | 15.627 | 10.602 | 1.00 | 26.40 |
| ATOM | 2840 | CG  | GLN | 553 | 86.632 | 15.494 | 12.141 | 1.00 | 22.69 |
| ATOM | 2841 | CD  | GLN | 553 | 86.438 | 16.836 | 12.823 | 1.00 | 25.90 |
| ATOM | 2842 | OE1 | GLN | 553 | 87.259 | 17.729 | 12.656 | 1.00 | 29.03 |
| ATOM | 2843 | NE2 | GLN | 553 | 85.351 | 16.994 | 13.566 | 1.00 | 23.53 |
| ATOM | 2844 | C   | GLN | 553 | 85.502 | 16.216 | 8.466  | 1.00 | 26.23 |
| ATOM | 2845 | O   | GLN | 553 | 85.177 | 15.259 | 7.779  | 1.00 | 30.00 |
| ATOM | 2846 | N   | ASP | 554 | 85.863 | 17.394 | 7.968  | 1.00 | 26.54 |
| ATOM | 2847 | CA  | ASP | 554 | 86.084 | 17.631 | 6.531  | 1.00 | 28.38 |
| ATOM | 2848 | CB  | ASP | 554 | 87.410 | 17.031 | 6.105  | 1.00 | 26.78 |
| ATOM | 2849 | CG  | ASP | 554 | 88.538 | 17.570 | 6.912  | 1.00 | 31.53 |
| ATOM | 2850 | OD1 | ASP | 554 | 88.789 | 18.795 | 6.823  | 1.00 | 35.18 |
| ATOM | 2851 | OD2 | ASP | 554 | 89.141 | 16.795 | 7.665  | 1.00 | 29.04 |
| ATOM | 2852 | C   | ASP | 554 | 85.011 | 17.221 | 5.545  | 1.00 | 29.14 |
| ATOM | 2853 | O   | ASP | 554 | 85.278 | 16.468 | 4.610  | 1.00 | 31.22 |
| ATOM | 2854 | N   | GLY | 555 | 83.824 | 17.793 | 5.709  | 1.00 | 31.20 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2855 | CA  | GLY | 555 | 82.723 | 17.490 | 4.811  | 1.00 | 28.83 |
| ATOM | 2856 | C   | GLY | 555 | 81.446 | 17.413 | 5.602  | 1.00 | 24.84 |
| ATOM | 2857 | O   | GLY | 555 | 81.448 | 17.647 | 6.814  | 1.00 | 21.78 |
| ATOM | 2858 | N   | PRO | 556 | 80.317 | 17.093 | 4.953  | 1.00 | 24.29 |
| ATOM | 2859 | CD  | PRO | 556 | 80.213 | 16.781 | 3.510  | 1.00 | 19.37 |
| ATOM | 2860 | CA  | PRO | 556 | 79.010 | 16.973 | 5.615  | 1.00 | 25.11 |
| ATOM | 2861 | CB  | PRO | 556 | 78.107 | 16.497 | 4.477  | 1.00 | 22.88 |
| ATOM | 2862 | CG  | PRO | 556 | 79.077 | 15.832 | 3.485  | 1.00 | 23.50 |
| ATOM | 2863 | C   | PRO | 556 | 79.006 | 15.982 | 6.777  | 1.00 | 27.67 |
| ATOM | 2864 | O   | PRO | 556 | 79.676 | 14.947 | 6.736  | 1.00 | 27.13 |
| ATOM | 2865 | N   | LEU | 557 | 78.253 | 16.297 | 7.820  | 1.00 | 29.27 |
| ATOM | 2866 | CA  | LEU | 557 | 78.164 | 15.405 | 8.972  | 1.00 | 31.19 |
| ATOM | 2867 | CB  | LEU | 557 | 77.583 | 16.130 | 10.188 | 1.00 | 29.94 |
| ATOM | 2868 | CG  | LEU | 557 | 77.019 | 15.260 | 11.323 | 1.00 | 26.87 |
| ATOM | 2869 | CD1 | LEU | 557 | 78.131 | 14.540 | 12.062 | 1.00 | 23.83 |
| ATOM | 2870 | CD2 | LEU | 557 | 76.237 | 16.146 | 12.275 | 1.00 | 23.80 |
| ATOM | 2871 | C   | LEU | 557 | 77.291 | 14.193 | 8.651  | 1.00 | 31.97 |
| ATOM | 2872 | O   | LEU | 557 | 76.158 | 14.332 | 8.184  | 1.00 | 31.18 |
| ATOM | 2873 | N   | TYR | 558 | 77.857 | 13.010 | 8.882  | 1.00 | 31.12 |
| ATOM | 2874 | CA  | TYR | 558 | 77.145 | 11.767 | 8.664  | 1.00 | 28.86 |
| ATOM | 2875 | CB  | TYR | 558 | 77.905 | 10.869 | 7.694  | 1.00 | 28.58 |
| ATOM | 2876 | CG  | TYR | 558 | 78.017 | 11.395 | 6.281  | 1.00 | 32.33 |
| ATOM | 2877 | CD1 | TYR | 558 | 79.034 | 10.962 | 5.443  | 1.00 | 35.23 |
| ATOM | 2878 | CE1 | TYR | 558 | 79.161 | 11.447 | 4.151  | 1.00 | 37.54 |
| ATOM | 2879 | CD2 | TYR | 558 | 77.123 | 12.336 | 5.787  | 1.00 | 35.27 |
| ATOM | 2880 | CE2 | TYR | 558 | 77.248 | 12.832 | 4.493  | 1.00 | 36.43 |
| ATOM | 2881 | CZ  | TYR | 558 | 78.276 | 12.382 | 3.680  | 1.00 | 37.05 |
| ATOM | 2882 | OH  | TYR | 558 | 78.423 | 12.869 | 2.394  | 1.00 | 39.97 |
| ATOM | 2883 | C   | TYR | 558 | 77.000 | 11.071 | 10.004 | 1.00 | 26.63 |
| ATOM | 2884 | O   | TYR | 558 | 77.985 | 10.885 | 10.725 | 1.00 | 24.67 |
| ATOM | 2885 | N   | VAL | 559 | 75.756 | 10.774 | 10.365 | 1.00 | 28.15 |
| ATOM | 2886 | CA  | VAL | 559 | 75.429 | 10.070 | 11.610 | 1.00 | 27.70 |
| ATOM | 2887 | CB  | VAL | 559 | 74.262 | 10.770 | 12.372 | 1.00 | 26.63 |
| ATOM | 2888 | CG1 | VAL | 559 | 73.876 | 9.959  | 13.603 | 1.00 | 24.70 |
| ATOM | 2889 | CG2 | VAL | 559 | 74.673 | 12.186 | 12.792 | 1.00 | 26.71 |
| ATOM | 2890 | C   | VAL | 559 | 75.061 | 8.635  | 11.205 | 1.00 | 27.08 |
| ATOM | 2891 | O   | VAL | 559 | 73.965 | 8.357  | 10.710 | 1.00 | 25.39 |
| ATOM | 2892 | N   | ILE | 560 | 76.002 | 7.729  | 11.399 | 1.00 | 28.25 |
| ATOM | 2893 | CA  | ILE | 560 | 75.820 | 6.335  | 11.000 | 1.00 | 29.62 |
| ATOM | 2894 | CB  | ILE | 560 | 77.225 | 5.682  | 10.678 | 1.00 | 30.06 |
| ATOM | 2895 | CG2 | ILE | 560 | 77.045 | 4.279  | 10.101 | 1.00 | 31.58 |
| ATOM | 2896 | CG1 | ILE | 560 | 78.004 | 6.557  | 9.686  | 1.00 | 27.50 |
| ATOM | 2897 | CD1 | ILE | 560 | 79.492 | 6.239  | 9.629  | 1.00 | 23.31 |
| ATOM | 2898 | C   | ILE | 560 | 75.075 | 5.488  | 12.032 | 1.00 | 29.88 |
| ATOM | 2899 | O   | ILE | 560 | 75.586 | 5.234  | 13.130 | 1.00 | 27.32 |
| ATOM | 2900 | N   | VAL | 561 | 73.857 | 5.078  | 11.687 | 1.00 | 29.09 |
| ATOM | 2901 | CA  | VAL | 561 | 73.053 | 4.228  | 12.568 | 1.00 | 28.70 |
| ATOM | 2902 | CB  | VAL | 561 | 71.743 | 4.932  | 13.037 | 1.00 | 25.29 |
| ATOM | 2903 | CG1 | VAL | 561 | 72.072 | 6.139  | 13.872 | 1.00 | 22.91 |
| ATOM | 2904 | CG2 | VAL | 561 | 70.887 | 5.312  | 11.870 | 1.00 | 22.38 |
| ATOM | 2905 | C   | VAL | 561 | 72.731 | 2.848  | 11.945 | 1.00 | 27.99 |
| ATOM | 2906 | O   | VAL | 561 | 73.052 | 2.590  | 10.783 | 1.00 | 27.88 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 2907 | N   | GLU | 562 | 72.143 | 1.969   | 12.754 | 1.00 | 27.38 |
| ATOM | 2908 | CA  | GLU | 562 | 71.759 | 0.616   | 12.347 | 1.00 | 28.01 |
| ATOM | 2909 | CB  | GLU | 562 | 71.246 | -0.161  | 13.555 | 1.00 | 25.37 |
| ATOM | 2910 | CG  | GLU | 562 | 72.322 | -0.487  | 14.570 | 1.00 | 29.22 |
| ATOM | 2911 | CD  | GLU | 562 | 71.785 | -1.190  | 15.796 | 1.00 | 30.94 |
| ATOM | 2912 | OE1 | GLU | 562 | 72.440 | -2.135  | 16.271 | 1.00 | 34.82 |
| ATOM | 2913 | OE2 | GLU | 562 | 70.716 | -0.795  | 16.297 | 1.00 | 32.77 |
| ATOM | 2914 | C   | GLU | 562 | 70.695 | 0.610   | 11.266 | 1.00 | 29.83 |
| ATOM | 2915 | O   | GLU | 562 | 69.822 | 1.452   | 11.274 | 1.00 | 34.69 |
| ATOM | 2916 | N   | TYR | 563 | 70.755 | -0.364  | 10.362 | 1.00 | 31.35 |
| ATOM | 2917 | CA  | TYR | 563 | 69.806 | -0.527  | 9.255  | 1.00 | 33.79 |
| ATOM | 2918 | CB  | TYR | 563 | 70.586 | -0.987  | 8.022  | 1.00 | 32.37 |
| ATOM | 2919 | CG  | TYR | 563 | 69.759 | -1.232  | 6.778  | 1.00 | 31.70 |
| ATOM | 2920 | CD1 | TYR | 563 | 68.858 | -0.277  | 6.319  | 1.00 | 35.00 |
| ATOM | 2921 | CE1 | TYR | 563 | 68.101 | -0.490  | 5.161  | 1.00 | 35.62 |
| ATOM | 2922 | CD2 | TYR | 563 | 69.888 | -2.416  | 6.053  | 1.00 | 31.64 |
| ATOM | 2923 | CE2 | TYR | 563 | 69.138 | -2.644  | 4.894  | 1.00 | 32.96 |
| ATOM | 2924 | CZ  | TYR | 563 | 68.242 | -1.674  | 4.462  | 1.00 | 36.20 |
| ATOM | 2925 | OH  | TYR | 563 | 67.494 | -1.906  | 3.340  | 1.00 | 39.54 |
| ATOM | 2926 | C   | TYR | 563 | 68.668 | -1.527  | 9.593  | 1.00 | 37.26 |
| ATOM | 2927 | O   | TYR | 563 | 68.915 | -2.566  | 10.212 | 1.00 | 38.86 |
| ATOM | 2928 | N   | ALA | 564 | 67.428 | -1.180  | 9.220  | 1.00 | 39.09 |
| ATOM | 2929 | CA  | ALA | 564 | 66.256 | -2.027  | 9.467  | 1.00 | 37.64 |
| ATOM | 2930 | CB  | ALA | 564 | 65.290 | -1.317  | 10.366 | 1.00 | 41.34 |
| ATOM | 2931 | C   | ALA | 564 | 65.600 | -2.337  | 8.124  | 1.00 | 39.33 |
| ATOM | 2932 | O   | ALA | 564 | 64.700 | -1.628  | 7.661  | 1.00 | 41.28 |
| ATOM | 2933 | N   | SER | 565 | 66.033 | -3.432  | 7.515  | 1.00 | 40.21 |
| ATOM | 2934 | CA  | SER | 565 | 65.567 | -3.867  | 6.202  | 1.00 | 40.22 |
| ATOM | 2935 | CB  | SER | 565 | 66.302 | -5.133  | 5.808  | 1.00 | 38.50 |
| ATOM | 2936 | OG  | SER | 565 | 66.174 | -6.084  | 6.847  | 1.00 | 37.66 |
| ATOM | 2937 | C   | SER | 565 | 64.095 | -4.087  | 5.987  | 1.00 | 42.30 |
| ATOM | 2938 | O   | SER | 565 | 63.657 | -4.155  | 4.840  | 1.00 | 46.83 |
| ATOM | 2939 | N   | LYS | 566 | 63.322 | -4.248  | 7.054  | 1.00 | 42.84 |
| ATOM | 2940 | CA  | LYS | 566 | 61.893 | -4.462  | 6.883  | 1.00 | 41.84 |
| ATOM | 2941 | CB  | LYS | 566 | 61.455 | -5.681  | 7.684  | 1.00 | 44.88 |
| ATOM | 2942 | CG  | LYS | 566 | 62.003 | -6.977  | 7.088  | 1.00 | 48.86 |
| ATOM | 2943 | CD  | LYS | 566 | 61.929 | -8.148  | 8.040  | 1.00 | 51.41 |
| ATOM | 2944 | CE  | LYS | 566 | 62.582 | -9.362  | 7.426  | 1.00 | 53.89 |
| ATOM | 2945 | NZ  | LYS | 566 | 62.706 | -10.465 | 8.417  | 1.00 | 59.37 |
| ATOM | 2946 | C   | LYS | 566 | 61.029 | -3.234  | 7.143  | 1.00 | 41.89 |
| ATOM | 2947 | O   | LYS | 566 | 59.815 | -3.337  | 7.341  | 1.00 | 43.68 |
| ATOM | 2948 | N   | GLY | 567 | 61.663 | -2.061  | 7.100  | 1.00 | 39.50 |
| ATOM | 2949 | CA  | GLY | 567 | 60.956 | -0.808  | 7.291  | 1.00 | 36.69 |
| ATOM | 2950 | C   | GLY | 567 | 60.306 | -0.640  | 8.644  | 1.00 | 35.86 |
| ATOM | 2951 | O   | GLY | 567 | 60.727 | -1.265  | 9.614  | 1.00 | 35.90 |
| ATOM | 2952 | N   | ASN | 568 | 59.296 | 0.218   | 8.711  | 1.00 | 35.45 |
| ATOM | 2953 | CA  | ASN | 568 | 58.615 | 0.447   | 9.966  | 1.00 | 38.10 |
| ATOM | 2954 | CB  | ASN | 568 | 57.961 | 1.839   | 10.029 | 1.00 | 40.77 |
| ATOM | 2955 | CG  | ASN | 568 | 56.701 | 1.962   | 9.163  | 1.00 | 43.52 |
| ATOM | 2956 | OD1 | ASN | 568 | 55.718 | 1.241   | 9.338  | 1.00 | 44.01 |
| ATOM | 2957 | ND2 | ASN | 568 | 56.710 | 2.932   | 8.263  | 1.00 | 45.39 |
| ATOM | 2958 | C   | ASN | 568 | 57.610 | -0.657  | 10.269 | 1.00 | 38.91 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 2959 | O   | ASN | 568 | 57.218 | -1.420 | 9.384  | 1.00 | 39.95 |
| ATOM | 2960 | N   | LEU | 569 | 57.204 | -0.717 | 11.534 | 1.00 | 38.93 |
| ATOM | 2961 | CA  | LEU | 569 | 56.256 | -1.692 | 12.047 | 1.00 | 36.49 |
| ATOM | 2962 | CB  | LEU | 569 | 56.126 | -1.507 | 13.555 | 1.00 | 36.53 |
| ATOM | 2963 | CG  | LEU | 569 | 55.150 | -2.417 | 14.290 | 1.00 | 35.27 |
| ATOM | 2964 | CD1 | LEU | 569 | 55.550 | -3.865 | 14.047 | 1.00 | 31.86 |
| ATOM | 2965 | CD2 | LEU | 569 | 55.148 | -2.067 | 15.768 | 1.00 | 35.00 |
| ATOM | 2966 | C   | LEU | 569 | 54.875 | -1.622 | 11.391 | 1.00 | 37.19 |
| ATOM | 2967 | O   | LEU | 569 | 54.231 | -2.654 | 11.175 | 1.00 | 38.40 |
| ATOM | 2968 | N   | ARG | 570 | 54.386 | -0.420 | 11.101 | 1.00 | 36.63 |
| ATOM | 2969 | CA  | ARG | 570 | 53.068 | -0.294 | 10.485 | 1.00 | 36.68 |
| ATOM | 2970 | CB  | ARG | 570 | 52.739 | 1.168  | 10.188 | 1.00 | 37.76 |
| ATOM | 2971 | CG  | ARG | 570 | 51.339 | 1.361  | 9.623  | 1.00 | 46.41 |
| ATOM | 2972 | CD  | ARG | 570 | 51.210 | 2.680  | 8.889  | 1.00 | 56.33 |
| ATOM | 2973 | NE  | ARG | 570 | 52.162 | 2.785  | 7.779  | 1.00 | 63.05 |
| ATOM | 2974 | CZ  | ARG | 570 | 53.010 | 3.798  | 7.603  | 1.00 | 66.33 |
| ATOM | 2975 | NH1 | ARG | 570 | 53.032 | 4.809  | 8.468  | 1.00 | 65.15 |
| ATOM | 2976 | NH2 | ARG | 570 | 53.853 | 3.786  | 6.580  | 1.00 | 66.56 |
| ATOM | 2977 | C   | ARG | 570 | 53.046 | -1.094 | 9.193  | 1.00 | 35.55 |
| ATOM | 2978 | O   | ARG | 570 | 52.248 | -2.015 | 9.018  | 1.00 | 35.33 |
| ATOM | 2979 | N   | GLU | 571 | 53.978 | -0.758 | 8.320  | 1.00 | 37.20 |
| ATOM | 2980 | CA  | GLU | 571 | 54.128 | -1.401 | 7.030  | 1.00 | 38.32 |
| ATOM | 2981 | CB  | GLU | 571 | 55.247 | -0.695 | 6.261  | 1.00 | 40.15 |
| ATOM | 2982 | CG  | GLU | 571 | 55.001 | 0.803  | 6.152  | 1.00 | 49.09 |
| ATOM | 2983 | CD  | GLU | 571 | 56.118 | 1.557  | 5.442  | 1.00 | 58.16 |
| ATOM | 2984 | OE1 | GLU | 571 | 57.279 | 1.073  | 5.421  | 1.00 | 61.41 |
| ATOM | 2985 | OE2 | GLU | 571 | 55.824 | 2.660  | 4.914  | 1.00 | 61.27 |
| ATOM | 2986 | C   | GLU | 571 | 54.406 | -2.906 | 7.170  | 1.00 | 36.74 |
| ATOM | 2987 | O   | GLU | 571 | 53.863 | -3.721 | 6.410  | 1.00 | 35.74 |
| ATOM | 2988 | N   | TYR | 572 | 55.241 | -3.266 | 8.141  | 1.00 | 35.13 |
| ATOM | 2989 | CA  | TYR | 572 | 55.591 | -4.665 | 8.401  | 1.00 | 37.12 |
| ATOM | 2990 | CB  | TYR | 572 | 56.591 | -4.736 | 9.560  | 1.00 | 34.39 |
| ATOM | 2991 | CG  | TYR | 572 | 56.984 | -6.128 | 10.029 | 1.00 | 33.48 |
| ATOM | 2992 | CD1 | TYR | 572 | 57.980 | -6.869 | 9.367  | 1.00 | 29.76 |
| ATOM | 2993 | CE1 | TYR | 572 | 58.394 | -8.119 | 9.845  | 1.00 | 27.14 |
| ATOM | 2994 | CD2 | TYR | 572 | 56.406 | -6.681 | 11.183 | 1.00 | 32.40 |
| ATOM | 2995 | CE2 | TYR | 572 | 56.814 | -7.931 | 11.669 | 1.00 | 30.83 |
| ATOM | 2996 | CZ  | TYR | 572 | 57.807 | -8.641 | 10.995 | 1.00 | 33.73 |
| ATOM | 2997 | OH  | TYR | 572 | 58.201 | -9.872 | 11.480 | 1.00 | 37.16 |
| ATOM | 2998 | C   | TYR | 572 | 54.330 | -5.468 | 8.729  | 1.00 | 38.92 |
| ATOM | 2999 | O   | TYR | 572 | 54.108 | -6.553 | 8.183  | 1.00 | 39.22 |
| ATOM | 3000 | N   | LEU | 573 | 53.507 | -4.922 | 9.618  | 1.00 | 38.41 |
| ATOM | 3001 | CA  | LEU | 573 | 52.261 | -5.563 | 10.016 | 1.00 | 37.56 |
| ATOM | 3002 | CB  | LEU | 573 | 51.573 | -4.711 | 11.084 | 1.00 | 36.44 |
| ATOM | 3003 | CG  | LEU | 573 | 52.270 | -4.617 | 12.437 | 1.00 | 33.91 |
| ATOM | 3004 | CD1 | LEU | 573 | 51.555 | -3.626 | 13.372 | 1.00 | 31.60 |
| ATOM | 3005 | CD2 | LEU | 573 | 52.313 | -6.024 | 13.003 | 1.00 | 30.78 |
| ATOM | 3006 | C   | LEU | 573 | 51.315 | -5.738 | 8.826  | 1.00 | 37.51 |
| ATOM | 3007 | O   | LEU | 573 | 50.847 | -6.836 | 8.539  | 1.00 | 36.70 |
| ATOM | 3008 | N   | GLN | 574 | 51.045 | -4.643 | 8.125  | 1.00 | 40.10 |
| ATOM | 3009 | CA  | GLN | 574 | 50.141 | -4.678 | 6.986  | 1.00 | 41.10 |
| ATOM | 3010 | CB  | GLN | 574 | 49.938 | -3.272 | 6.439  | 1.00 | 40.12 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 3011 | CG  | GLN | 574 | 49.171 | -2.381  | 7.374  | 1.00 | 40.77 |
| ATOM | 3012 | CD  | GLN | 574 | 49.079 | -0.987  | 6.852  | 1.00 | 43.90 |
| ATOM | 3013 | OE1 | GLN | 574 | 49.679 | -0.652  | 5.835  | 1.00 | 46.93 |
| ATOM | 3014 | NE2 | GLN | 574 | 48.357 | -0.143  | 7.558  | 1.00 | 46.85 |
| ATOM | 3015 | C   | GLN | 574 | 50.546 | -5.638  | 5.875  | 1.00 | 41.31 |
| ATOM | 3016 | O   | GLN | 574 | 49.699 | -6.323  | 5.309  | 1.00 | 44.33 |
| ATOM | 3017 | N   | ALA | 575 | 51.840 | -5.735  | 5.601  | 1.00 | 41.46 |
| ATOM | 3018 | CA  | ALA | 575 | 52.317 | -6.628  | 4.555  | 1.00 | 39.80 |
| ATOM | 3019 | CB  | ALA | 575 | 53.745 | -6.301  | 4.218  | 1.00 | 40.58 |
| ATOM | 3020 | C   | ALA | 575 | 52.197 | -8.096  | 4.947  | 1.00 | 40.86 |
| ATOM | 3021 | O   | ALA | 575 | 52.527 | -8.975  | 4.165  | 1.00 | 41.50 |
| ATOM | 3022 | N   | ARG | 576 | 51.757 | -8.359  | 6.168  | 1.00 | 42.47 |
| ATOM | 3023 | CA  | ARG | 576 | 51.624 | -9.726  | 6.641  | 1.00 | 42.68 |
| ATOM | 3024 | CB  | ARG | 576 | 52.679 | -9.988  | 7.716  | 1.00 | 41.04 |
| ATOM | 3025 | CG  | ARG | 576 | 54.095 | -9.958  | 7.161  | 1.00 | 42.73 |
| ATOM | 3026 | CD  | ARG | 576 | 55.156 | -9.943  | 8.257  | 1.00 | 45.59 |
| ATOM | 3027 | NE  | ARG | 576 | 56.514 | -9.870  | 7.695  | 1.00 | 43.89 |
| ATOM | 3028 | CZ  | ARG | 576 | 56.981 | -8.856  | 6.969  | 1.00 | 43.35 |
| ATOM | 3029 | NH1 | ARG | 576 | 56.219 | -7.803  | 6.703  | 1.00 | 44.85 |
| ATOM | 3030 | NH2 | ARG | 576 | 58.215 | -8.902  | 6.497  | 1.00 | 41.84 |
| ATOM | 3031 | C   | ARG | 576 | 50.232 | -10.014 | 7.180  | 1.00 | 44.86 |
| ATOM | 3032 | O   | ARG | 576 | 50.043 | -10.943 | 7.970  | 1.00 | 46.08 |
| ATOM | 3033 | N   | ARG | 577 | 49.258 | -9.216  | 6.753  | 1.00 | 46.72 |
| ATOM | 3034 | CA  | ARG | 577 | 47.877 | -9.401  | 7.196  | 1.00 | 47.61 |
| ATOM | 3035 | CB  | ARG | 577 | 46.994 | -8.239  | 6.723  | 1.00 | 46.35 |
| ATOM | 3036 | CG  | ARG | 577 | 47.101 | -6.995  | 7.581  | 1.00 | 47.71 |
| ATOM | 3037 | CD  | ARG | 577 | 46.329 | -5.831  | 6.999  | 1.00 | 49.15 |
| ATOM | 3038 | NE  | ARG | 577 | 46.213 | -4.735  | 7.957  | 1.00 | 53.23 |
| ATOM | 3039 | CZ  | ARG | 577 | 45.584 | -3.587  | 7.725  | 1.00 | 54.38 |
| ATOM | 3040 | NH1 | ARG | 577 | 45.020 | -3.368  | 6.549  | 1.00 | 56.41 |
| ATOM | 3041 | NH2 | ARG | 577 | 45.481 | -2.676  | 8.686  | 1.00 | 58.13 |
| ATOM | 3042 | C   | ARG | 577 | 47.298 | -10.740 | 6.743  | 1.00 | 47.36 |
| ATOM | 3043 | O   | ARG | 577 | 47.246 | -11.031 | 5.550  | 1.00 | 48.52 |
| ATOM | 3044 | N   | GLN | 594 | 53.349 | -13.948 | 7.960  | 1.00 | 68.05 |
| ATOM | 3045 | CA  | GLN | 594 | 52.144 | -14.067 | 8.772  | 1.00 | 66.75 |
| ATOM | 3046 | CB  | GLN | 594 | 51.259 | -15.220 | 8.277  | 1.00 | 66.87 |
| ATOM | 3047 | C   | GLN | 594 | 52.535 | -14.284 | 10.233 | 1.00 | 64.71 |
| ATOM | 3048 | O   | GLN | 594 | 53.192 | -15.264 | 10.580 | 1.00 | 64.86 |
| ATOM | 3049 | N   | LEU | 595 | 52.159 | -13.335 | 11.074 | 1.00 | 61.14 |
| ATOM | 3050 | CA  | LEU | 595 | 52.489 | -13.422 | 12.480 | 1.00 | 58.19 |
| ATOM | 3051 | CB  | LEU | 595 | 52.599 | -12.008 | 13.056 | 1.00 | 56.33 |
| ATOM | 3052 | CG  | LEU | 595 | 53.532 | -11.147 | 12.203 | 1.00 | 57.36 |
| ATOM | 3053 | CD1 | LEU | 595 | 53.375 | -9.692  | 12.533 | 1.00 | 59.51 |
| ATOM | 3054 | CD2 | LEU | 595 | 54.967 | -11.598 | 12.382 | 1.00 | 56.98 |
| ATOM | 3055 | C   | LEU | 595 | 51.469 | -14.237 | 13.251 | 1.00 | 56.25 |
| ATOM | 3056 | O   | LEU | 595 | 50.314 | -14.359 | 12.834 | 1.00 | 56.60 |
| ATOM | 3057 | N   | SER | 596 | 51.927 | -14.845 | 14.341 | 1.00 | 53.07 |
| ATOM | 3058 | CA  | SER | 596 | 51.100 | -15.642 | 15.229 | 1.00 | 48.64 |
| ATOM | 3059 | CB  | SER | 596 | 51.883 | -16.841 | 15.736 | 1.00 | 46.41 |
| ATOM | 3060 | OG  | SER | 596 | 52.806 | -16.435 | 16.737 | 1.00 | 46.50 |
| ATOM | 3061 | C   | SER | 596 | 50.796 | -14.756 | 16.423 | 1.00 | 48.95 |
| ATOM | 3062 | O   | SER | 596 | 51.492 | -13.767 | 16.649 | 1.00 | 49.39 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 3063 | N   | SER | 597 | 49.833 | -15.163 | 17.242 | 1.00 | 50.27 |
| ATOM | 3064 | CA  | SER | 597 | 49.469 | -14.387 | 18.424 | 1.00 | 51.93 |
| ATOM | 3065 | CB  | SER | 597 | 48.391 | -15.123 | 19.225 | 1.00 | 52.03 |
| ATOM | 3066 | OG  | SER | 597 | 47.540 | -15.854 | 18.365 | 1.00 | 52.95 |
| ATOM | 3067 | C   | SER | 597 | 50.685 | -14.143 | 19.314 | 1.00 | 52.72 |
| ATOM | 3068 | O   | SER | 597 | 50.792 | -13.093 | 19.943 | 1.00 | 55.04 |
| ATOM | 3069 | N   | LYS | 598 | 51.613 | -15.100 | 19.344 | 1.00 | 53.55 |
| ATOM | 3070 | CA  | LYS | 598 | 52.824 | -14.961 | 20.159 | 1.00 | 53.84 |
| ATOM | 3071 | CB  | LYS | 598 | 53.566 | -16.295 | 20.248 | 1.00 | 54.25 |
| ATOM | 3072 | CG  | LYS | 598 | 54.376 | -16.457 | 21.524 | 1.00 | 57.30 |
| ATOM | 3073 | CD  | LYS | 598 | 55.057 | -17.824 | 21.570 | 1.00 | 58.11 |
| ATOM | 3074 | CE  | LYS | 598 | 55.780 | -18.055 | 22.893 | 1.00 | 59.00 |
| ATOM | 3075 | NZ  | LYS | 598 | 54.840 | -18.169 | 24.043 | 1.00 | 57.85 |
| ATOM | 3076 | C   | LYS | 598 | 53.728 | -13.909 | 19.527 | 1.00 | 52.48 |
| ATOM | 3077 | O   | LYS | 598 | 54.273 | -13.052 | 20.227 | 1.00 | 51.72 |
| ATOM | 3078 | N   | ASP | 599 | 53.842 | -13.960 | 18.198 | 1.00 | 50.65 |
| ATOM | 3079 | CA  | ASP | 599 | 54.657 | -13.021 | 17.435 | 1.00 | 48.52 |
| ATOM | 3080 | CB  | ASP | 599 | 54.568 | -13.294 | 15.929 | 1.00 | 46.71 |
| ATOM | 3081 | CG  | ASP | 599 | 55.233 | -14.607 | 15.515 | 1.00 | 48.88 |
| ATOM | 3082 | OD1 | ASP | 599 | 55.898 | -15.260 | 16.344 | 1.00 | 53.76 |
| ATOM | 3083 | OD2 | ASP | 599 | 55.100 | -14.986 | 14.330 | 1.00 | 46.70 |
| ATOM | 3084 | C   | ASP | 599 | 54.173 | -11.598 | 17.706 | 1.00 | 48.66 |
| ATOM | 3085 | O   | ASP | 599 | 54.976 | -10.703 | 17.960 | 1.00 | 52.86 |
| ATOM | 3086 | N   | LEU | 600 | 52.852 | -11.406 | 17.684 | 1.00 | 44.53 |
| ATOM | 3087 | CA  | LEU | 600 | 52.272 | -10.099 | 17.938 | 1.00 | 41.06 |
| ATOM | 3088 | CB  | LEU | 600 | 50.774 | -10.100 | 17.632 | 1.00 | 39.23 |
| ATOM | 3089 | CG  | LEU | 600 | 50.354 | -10.374 | 16.178 | 1.00 | 36.50 |
| ATOM | 3090 | CD1 | LEU | 600 | 48.850 | -10.272 | 16.063 | 1.00 | 34.99 |
| ATOM | 3091 | CD2 | LEU | 600 | 51.000 | -9.393  | 15.232 | 1.00 | 33.72 |
| ATOM | 3092 | C   | LEU | 600 | 52.543 | -9.633  | 19.369 | 1.00 | 40.96 |
| ATOM | 3093 | O   | LEU | 600 | 52.890 | -8.467  | 19.580 | 1.00 | 42.04 |
| ATOM | 3094 | N   | VAL | 601 | 52.417 | -10.533 | 20.348 | 1.00 | 41.02 |
| ATOM | 3095 | CA  | VAL | 601 | 52.685 | -10.156 | 21.744 | 1.00 | 43.57 |
| ATOM | 3096 | CB  | VAL | 601 | 52.236 | -11.229 | 22.791 | 1.00 | 43.60 |
| ATOM | 3097 | CG1 | VAL | 601 | 52.254 | -10.607 | 24.205 | 1.00 | 43.44 |
| ATOM | 3098 | CG2 | VAL | 601 | 50.848 | -11.761 | 22.464 | 1.00 | 42.33 |
| ATOM | 3099 | C   | VAL | 601 | 54.192 | -9.904  | 21.901 | 1.00 | 42.85 |
| ATOM | 3100 | O   | VAL | 601 | 54.611 | -8.989  | 22.611 | 1.00 | 44.28 |
| ATOM | 3101 | N   | SER | 602 | 54.986 | -10.685 | 21.175 | 1.00 | 41.33 |
| ATOM | 3102 | CA  | SER | 602 | 56.442 | -10.581 | 21.180 | 1.00 | 41.43 |
| ATOM | 3103 | CB  | SER | 602 | 57.014 | -11.648 | 20.245 | 1.00 | 40.94 |
| ATOM | 3104 | OG  | SER | 602 | 58.434 | -11.612 | 20.184 | 1.00 | 46.26 |
| ATOM | 3105 | C   | SER | 602 | 56.859 | -9.176  | 20.722 | 1.00 | 40.58 |
| ATOM | 3106 | O   | SER | 602 | 57.629 | -8.497  | 21.403 | 1.00 | 42.32 |
| ATOM | 3107 | N   | CYS | 603 | 56.318 | -8.737  | 19.589 | 1.00 | 38.34 |
| ATOM | 3108 | CA  | CYS | 603 | 56.580 | -7.409  | 19.051 | 1.00 | 37.28 |
| ATOM | 3109 | CB  | CYS | 603 | 55.715 | -7.170  | 17.815 | 1.00 | 38.09 |
| ATOM | 3110 | SG  | CYS | 603 | 55.735 | -5.497  | 17.170 | 0.50 | 42.18 |
| ATOM | 3111 | C   | CYS | 603 | 56.282 | -6.337  | 20.105 | 1.00 | 35.81 |
| ATOM | 3112 | O   | CYS | 603 | 57.038 | -5.380  | 20.241 | 1.00 | 37.87 |
| ATOM | 3113 | N   | ALA | 604 | 55.198 | -6.508  | 20.858 | 1.00 | 33.96 |
| ATOM | 3114 | CA  | ALA | 604 | 54.804 | -5.572  | 21.911 | 1.00 | 34.97 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3115 | CB  | ALA | 604 | 53.393 | -5.917 | 22.409 | 1.00 | 34.13 |
| ATOM | 3116 | C   | ALA | 604 | 55.791 | -5.610 | 23.081 | 1.00 | 36.68 |
| ATOM | 3117 | O   | ALA | 604 | 56.085 | -4.585 | 23.704 | 1.00 | 36.78 |
| ATOM | 3118 | N   | TYR | 605 | 56.281 | -6.807 | 23.385 | 1.00 | 37.68 |
| ATOM | 3119 | CA  | TYR | 605 | 57.254 | -7.005 | 24.461 | 1.00 | 38.38 |
| ATOM | 3120 | CB  | TYR | 605 | 57.533 | -8.498 | 24.643 | 1.00 | 37.62 |
| ATOM | 3121 | CG  | TYR | 605 | 58.635 | -8.806 | 25.622 | 1.00 | 36.56 |
| ATOM | 3122 | CD1 | TYR | 605 | 58.498 | -8.509 | 26.974 | 1.00 | 39.05 |
| ATOM | 3123 | CE1 | TYR | 605 | 59.520 | -8.809 | 27.893 | 1.00 | 41.37 |
| ATOM | 3124 | CD2 | TYR | 605 | 59.812 | -9.407 | 25.198 | 1.00 | 38.09 |
| ATOM | 3125 | CE2 | TYR | 605 | 60.848 | -9.711 | 26.105 | 1.00 | 38.55 |
| ATOM | 3126 | CZ  | TYR | 605 | 60.692 | -9.409 | 27.454 | 1.00 | 40.73 |
| ATOM | 3127 | OH  | TYR | 605 | 61.707 | -9.704 | 28.348 | 1.00 | 41.44 |
| ATOM | 3128 | C   | TYR | 605 | 58.549 | -6.267 | 24.123 | 1.00 | 38.44 |
| ATOM | 3129 | O   | TYR | 605 | 59.053 | -5.485 | 24.937 | 1.00 | 40.78 |
| ATOM | 3130 | N   | GLN | 606 | 59.053 | -6.501 | 22.908 | 1.00 | 36.07 |
| ATOM | 3131 | CA  | GLN | 606 | 60.276 | -5.872 | 22.398 | 1.00 | 35.28 |
| ATOM | 3132 | CB  | GLN | 606 | 60.594 | -6.415 | 21.002 | 1.00 | 34.24 |
| ATOM | 3133 | CG  | GLN | 606 | 61.105 | -7.851 | 21.005 | 1.00 | 32.26 |
| ATOM | 3134 | CD  | GLN | 606 | 61.339 | -8.388 | 19.608 | 1.00 | 30.17 |
| ATOM | 3135 | OE1 | GLN | 606 | 62.274 | -7.988 | 18.907 | 1.00 | 31.89 |
| ATOM | 3136 | NE2 | GLN | 606 | 60.471 | -9.285 | 19.182 | 1.00 | 30.68 |
| ATOM | 3137 | C   | GLN | 606 | 60.210 | -4.335 | 22.355 | 1.00 | 36.39 |
| ATOM | 3138 | O   | GLN | 606 | 61.206 | -3.660 | 22.632 | 1.00 | 39.59 |
| ATOM | 3139 | N   | VAL | 607 | 59.040 | -3.798 | 22.006 | 1.00 | 32.78 |
| ATOM | 3140 | CA  | VAL | 607 | 58.839 | -2.350 | 21.944 | 1.00 | 30.29 |
| ATOM | 3141 | CB  | VAL | 607 | 57.489 | -1.982 | 21.221 | 1.00 | 28.48 |
| ATOM | 3142 | CG1 | VAL | 607 | 57.219 | -0.488 | 21.298 | 1.00 | 28.68 |
| ATOM | 3143 | CG2 | VAL | 607 | 57.535 | -2.416 | 19.742 | 1.00 | 22.96 |
| ATOM | 3144 | C   | VAL | 607 | 58.868 | -1.766 | 23.364 | 1.00 | 30.21 |
| ATOM | 3145 | O   | VAL | 607 | 59.469 | -0.705 | 23.591 | 1.00 | 31.24 |
| ATOM | 3146 | N   | ALA | 608 | 58.224 | -2.451 | 24.311 | 1.00 | 27.88 |
| ATOM | 3147 | CA  | ALA | 608 | 58.187 | -2.001 | 25.694 | 1.00 | 27.66 |
| ATOM | 3148 | CB  | ALA | 608 | 57.242 | -2.874 | 26.494 | 1.00 | 26.42 |
| ATOM | 3149 | C   | ALA | 608 | 59.585 | -2.019 | 26.309 | 1.00 | 29.04 |
| ATOM | 3150 | O   | ALA | 608 | 59.950 | -1.144 | 27.094 | 1.00 | 27.53 |
| ATOM | 3151 | N   | ARG | 609 | 60.377 | -3.013 | 25.932 | 1.00 | 28.91 |
| ATOM | 3152 | CA  | ARG | 609 | 61.733 | -3.120 | 26.440 | 1.00 | 31.64 |
| ATOM | 3153 | CB  | ARG | 609 | 62.394 | -4.405 | 25.953 | 1.00 | 33.78 |
| ATOM | 3154 | CG  | ARG | 609 | 61.672 | -5.647 | 26.373 | 1.00 | 38.53 |
| ATOM | 3155 | CD  | ARG | 609 | 62.636 | -6.791 | 26.448 | 1.00 | 41.78 |
| ATOM | 3156 | NE  | ARG | 609 | 63.319 | -6.838 | 27.733 | 1.00 | 47.58 |
| ATOM | 3157 | CZ  | ARG | 609 | 64.441 | -7.510 | 27.955 | 1.00 | 51.52 |
| ATOM | 3158 | NH1 | ARG | 609 | 65.012 | -8.179 | 26.964 | 1.00 | 50.61 |
| ATOM | 3159 | NH2 | ARG | 609 | 64.954 | -7.569 | 29.186 | 1.00 | 54.36 |
| ATOM | 3160 | C   | ARG | 609 | 62.581 | -1.918 | 26.024 | 1.00 | 33.26 |
| ATOM | 3161 | O   | ARG | 609 | 63.144 | -1.221 | 26.885 | 1.00 | 34.50 |
| ATOM | 3162 | N   | GLY | 610 | 62.624 | -1.650 | 24.717 | 1.00 | 30.25 |
| ATOM | 3163 | CA  | GLY | 610 | 63.395 | -0.534 | 24.199 | 1.00 | 25.40 |
| ATOM | 3164 | C   | GLY | 610 | 63.010 | 0.730  | 24.930 | 1.00 | 24.12 |
| ATOM | 3165 | O   | GLY | 610 | 63.857 | 1.507  | 25.345 | 1.00 | 24.74 |
| ATOM | 3166 | N   | MET | 611 | 61.712 | 0.907  | 25.131 | 1.00 | 25.81 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3167 | CA  | MET | 611 | 61.192 | 2.062  | 25.843 | 1.00 | 26.95 |
| ATOM | 3168 | CB  | MET | 611 | 59.672 | 2.121  | 25.702 | 1.00 | 24.60 |
| ATOM | 3169 | CG  | MET | 611 | 59.215 | 2.462  | 24.303 | 1.00 | 24.10 |
| ATOM | 3170 | SD  | MET | 611 | 59.972 | 4.035  | 23.821 | 1.00 | 26.77 |
| ATOM | 3171 | CE  | MET | 611 | 59.546 | 5.090  | 25.184 | 1.00 | 19.21 |
| ATOM | 3172 | C   | MET | 611 | 61.600 | 2.071  | 27.314 | 1.00 | 27.68 |
| ATOM | 3173 | O   | MET | 611 | 61.891 | 3.128  | 27.865 | 1.00 | 28.22 |
| ATOM | 3174 | N   | GLU | 612 | 61.562 | 0.908  | 27.967 | 1.00 | 31.07 |
| ATOM | 3175 | CA  | GLU | 612 | 61.955 | 0.791  | 29.382 | 1.00 | 35.25 |
| ATOM | 3176 | CB  | GLU | 612 | 61.809 | -0.659 | 29.872 | 1.00 | 34.95 |
| ATOM | 3177 | CG  | GLU | 612 | 62.383 | -0.937 | 31.257 | 1.00 | 31.64 |
| ATOM | 3178 | CD  | GLU | 612 | 62.392 | -2.422 | 31.631 | 1.00 | 32.34 |
| ATOM | 3179 | OE1 | GLU | 612 | 62.599 | -3.275 | 30.738 | 1.00 | 30.09 |
| ATOM | 3180 | OE2 | GLU | 612 | 62.226 | -2.737 | 32.831 | 1.00 | 33.90 |
| ATOM | 3181 | C   | GLU | 612 | 63.409 | 1.252  | 29.468 | 1.00 | 37.14 |
| ATOM | 3182 | O   | GLU | 612 | 63.791 | 1.995  | 30.390 | 1.00 | 35.60 |
| ATOM | 3183 | N   | TYR | 613 | 64.196 | 0.868  | 28.457 | 1.00 | 37.89 |
| ATOM | 3184 | CA  | TYR | 613 | 65.601 | 1.247  | 28.392 | 1.00 | 36.68 |
| ATOM | 3185 | CB  | TYR | 613 | 66.328 | 0.531  | 27.246 | 1.00 | 34.23 |
| ATOM | 3186 | CG  | TYR | 613 | 67.801 | 0.888  | 27.175 | 1.00 | 36.59 |
| ATOM | 3187 | CD1 | TYR | 613 | 68.734 | 0.263  | 28.005 | 1.00 | 36.83 |
| ATOM | 3188 | CE1 | TYR | 613 | 70.090 | 0.649  | 28.013 | 1.00 | 34.51 |
| ATOM | 3189 | CD2 | TYR | 613 | 68.252 | 1.909  | 26.339 | 1.00 | 35.28 |
| ATOM | 3190 | CE2 | TYR | 613 | 69.596 | 2.306  | 26.340 | 1.00 | 34.09 |
| ATOM | 3191 | CZ  | TYR | 613 | 70.512 | 1.674  | 27.181 | 1.00 | 35.91 |
| ATOM | 3192 | OH  | TYR | 613 | 71.826 | 2.089  | 27.212 | 1.00 | 29.78 |
| ATOM | 3193 | C   | TYR | 613 | 65.724 | 2.760  | 28.233 | 1.00 | 37.58 |
| ATOM | 3194 | O   | TYR | 613 | 66.362 | 3.414  | 29.056 | 1.00 | 39.84 |
| ATOM | 3195 | N   | LEU | 614 | 65.081 | 3.326  | 27.214 | 1.00 | 35.53 |
| ATOM | 3196 | CA  | LEU | 614 | 65.156 | 4.766  | 26.988 | 1.00 | 34.58 |
| ATOM | 3197 | CB  | LEU | 614 | 64.314 | 5.157  | 25.781 | 1.00 | 31.88 |
| ATOM | 3198 | CG  | LEU | 614 | 64.760 | 4.601  | 24.429 | 1.00 | 29.62 |
| ATOM | 3199 | CD1 | LEU | 614 | 63.783 | 5.016  | 23.346 | 1.00 | 29.19 |
| ATOM | 3200 | CD2 | LEU | 614 | 66.134 | 5.133  | 24.111 | 1.00 | 32.49 |
| ATOM | 3201 | C   | LEU | 614 | 64.698 | 5.538  | 28.218 | 1.00 | 36.38 |
| ATOM | 3202 | O   | LEU | 614 | 65.325 | 6.525  | 28.618 | 1.00 | 33.81 |
| ATOM | 3203 | N   | ALA | 615 | 63.608 | 5.076  | 28.821 | 1.00 | 38.08 |
| ATOM | 3204 | CA  | ALA | 615 | 63.066 | 5.711  | 30.018 | 1.00 | 41.01 |
| ATOM | 3205 | CB  | ALA | 615 | 61.767 | 5.018  | 30.444 | 1.00 | 42.33 |
| ATOM | 3206 | C   | ALA | 615 | 64.099 | 5.683  | 31.147 | 1.00 | 40.47 |
| ATOM | 3207 | O   | ALA | 615 | 64.291 | 6.690  | 31.831 | 1.00 | 41.28 |
| ATOM | 3208 | N   | SER | 616 | 64.788 | 4.553  | 31.307 | 1.00 | 38.78 |
| ATOM | 3209 | CA  | SER | 616 | 65.806 | 4.441  | 32.347 | 1.00 | 40.97 |
| ATOM | 3210 | CB  | SER | 616 | 66.354 | 3.009  | 32.454 | 1.00 | 37.82 |
| ATOM | 3211 | OG  | SER | 616 | 67.172 | 2.651  | 31.359 | 1.00 | 34.73 |
| ATOM | 3212 | C   | SER | 616 | 66.941 | 5.416  | 32.061 | 1.00 | 42.68 |
| ATOM | 3213 | O   | SER | 616 | 67.714 | 5.769  | 32.957 | 1.00 | 45.78 |
| ATOM | 3214 | N   | LYS | 617 | 67.015 | 5.869  | 30.815 | 1.00 | 40.92 |
| ATOM | 3215 | CA  | LYS | 617 | 68.025 | 6.816  | 30.380 | 1.00 | 38.04 |
| ATOM | 3216 | CB  | LYS | 617 | 68.541 | 6.411  | 29.003 | 1.00 | 38.25 |
| ATOM | 3217 | CG  | LYS | 617 | 69.293 | 5.111  | 29.021 | 1.00 | 36.40 |
| ATOM | 3218 | CD  | LYS | 617 | 70.421 | 5.221  | 29.992 | 1.00 | 38.14 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3219 | CE  | LYS | 617 | 71.215 | 3.941  | 30.086 | 1.00 | 38.43 |
| ATOM | 3220 | NZ  | LYS | 617 | 72.530 | 4.210  | 30.751 | 1.00 | 43.07 |
| ATOM | 3221 | C   | LYS | 617 | 67.475 | 8.242  | 30.350 | 1.00 | 38.42 |
| ATOM | 3222 | O   | LYS | 617 | 68.072 | 9.133  | 29.744 | 1.00 | 41.37 |
| ATOM | 3223 | N   | LYS | 618 | 66.323 | 8.444  | 30.985 | 1.00 | 37.25 |
| ATOM | 3224 | CA  | LYS | 618 | 65.674 | 9.743  | 31.067 | 1.00 | 36.75 |
| ATOM | 3225 | CB  | LYS | 618 | 66.653 | 10.780 | 31.632 | 1.00 | 43.27 |
| ATOM | 3226 | CG  | LYS | 618 | 67.340 | 10.392 | 32.938 | 1.00 | 51.59 |
| ATOM | 3227 | CD  | LYS | 618 | 66.377 | 10.361 | 34.092 | 1.00 | 61.24 |
| ATOM | 3228 | CE  | LYS | 618 | 67.070 | 9.945  | 35.373 | 1.00 | 67.83 |
| ATOM | 3229 | NZ  | LYS | 618 | 66.105 | 10.039 | 36.510 | 1.00 | 75.22 |
| ATOM | 3230 | C   | LYS | 618 | 65.167 | 10.222 | 29.706 | 1.00 | 36.61 |
| ATOM | 3231 | O   | LYS | 618 | 64.856 | 11.396 | 29.535 | 1.00 | 35.94 |
| ATOM | 3232 | N   | CYS | 619 | 65.058 | 9.308  | 28.751 | 1.00 | 36.26 |
| ATOM | 3233 | CA  | CYS | 619 | 64.603 | 9.666  | 27.412 | 1.00 | 33.41 |
| ATOM | 3234 | CB  | CYS | 619 | 65.351 | 8.843  | 26.365 | 1.00 | 32.17 |
| ATOM | 3235 | SG  | CYS | 619 | 65.006 | 9.223  | 24.650 | 1.00 | 26.92 |
| ATOM | 3236 | C   | CYS | 619 | 63.108 | 9.546  | 27.194 | 1.00 | 32.29 |
| ATOM | 3237 | O   | CYS | 619 | 62.510 | 8.472  | 27.373 | 1.00 | 29.13 |
| ATOM | 3238 | N   | ILE | 620 | 62.515 | 10.679 | 26.827 | 1.00 | 31.60 |
| ATOM | 3239 | CA  | ILE | 620 | 61.091 | 10.763 | 26.528 | 1.00 | 31.21 |
| ATOM | 3240 | CB  | ILE | 620 | 60.435 | 11.966 | 27.212 | 1.00 | 29.57 |
| ATOM | 3241 | CG2 | ILE | 620 | 58.955 | 12.031 | 26.860 | 1.00 | 31.49 |
| ATOM | 3242 | CG1 | ILE | 620 | 60.578 | 11.848 | 28.727 | 1.00 | 27.85 |
| ATOM | 3243 | CD1 | ILE | 620 | 60.065 | 13.046 | 29.463 | 1.00 | 26.50 |
| ATOM | 3244 | C   | ILE | 620 | 61.034 | 10.972 | 25.018 | 1.00 | 32.18 |
| ATOM | 3245 | O   | ILE | 620 | 61.481 | 11.993 | 24.512 | 1.00 | 33.18 |
| ATOM | 3246 | N   | HIS | 621 | 60.472 | 9.990  | 24.318 | 1.00 | 31.93 |
| ATOM | 3247 | CA  | HIS | 621 | 60.354 | 9.970  | 22.864 | 1.00 | 32.59 |
| ATOM | 3248 | CB  | HIS | 621 | 59.933 | 8.552  | 22.420 | 1.00 | 29.51 |
| ATOM | 3249 | CG  | HIS | 621 | 60.076 | 8.288  | 20.951 | 1.00 | 27.45 |
| ATOM | 3250 | CD2 | HIS | 621 | 60.663 | 7.262  | 20.286 | 1.00 | 25.84 |
| ATOM | 3251 | ND1 | HIS | 621 | 59.528 | 9.106  | 19.979 | 1.00 | 25.20 |
| ATOM | 3252 | CE1 | HIS | 621 | 59.774 | 8.596  | 18.783 | 1.00 | 25.07 |
| ATOM | 3253 | NE2 | HIS | 621 | 60.456 | 7.473  | 18.942 | 1.00 | 23.24 |
| ATOM | 3254 | C   | HIS | 621 | 59.365 | 10.992 | 22.320 | 1.00 | 35.31 |
| ATOM | 3255 | O   | HIS | 621 | 59.555 | 11.481 | 21.220 | 1.00 | 39.24 |
| ATOM | 3256 | N   | ARG | 622 | 58.256 | 11.216 | 23.028 | 1.00 | 36.50 |
| ATOM | 3257 | CA  | ARG | 622 | 57.225 | 12.169 | 22.580 | 1.00 | 35.78 |
| ATOM | 3258 | CB  | ARG | 622 | 57.783 | 13.582 | 22.462 | 1.00 | 32.55 |
| ATOM | 3259 | CG  | ARG | 622 | 58.211 | 14.156 | 23.778 | 1.00 | 30.54 |
| ATOM | 3260 | CD  | ARG | 622 | 58.799 | 15.551 | 23.635 | 0.50 | 27.28 |
| ATOM | 3261 | NE  | ARG | 622 | 59.249 | 16.043 | 24.930 | 0.50 | 24.53 |
| ATOM | 3262 | CZ  | ARG | 622 | 60.409 | 15.707 | 25.499 | 0.50 | 27.85 |
| ATOM | 3263 | NH1 | ARG | 622 | 61.249 | 14.883 | 24.877 | 0.50 | 27.61 |
| ATOM | 3264 | NH2 | ARG | 622 | 60.711 | 16.158 | 26.714 | 0.50 | 25.34 |
| ATOM | 3265 | C   | ARG | 622 | 56.447 | 11.806 | 21.297 | 1.00 | 35.76 |
| ATOM | 3266 | O   | ARG | 622 | 55.438 | 12.430 | 20.999 | 1.00 | 36.61 |
| ATOM | 3267 | N   | ASP | 623 | 56.923 | 10.818 | 20.537 | 1.00 | 34.69 |
| ATOM | 3268 | CA  | ASP | 623 | 56.197 | 10.400 | 19.335 | 1.00 | 34.09 |
| ATOM | 3269 | CB  | ASP | 623 | 56.628 | 11.171 | 18.081 | 1.00 | 34.77 |
| ATOM | 3270 | CG  | ASP | 623 | 55.727 | 10.869 | 16.863 | 1.00 | 43.51 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3271 | OD1 | ASP | 623 | 56.213 | 10.992 | 15.714 | 1.00 | 47.45 |
| ATOM | 3272 | OD2 | ASP | 623 | 54.538 | 10.509 | 17.032 | 1.00 | 47.51 |
| ATOM | 3273 | C   | ASP | 623 | 56.321 | 8.903  | 19.115 | 1.00 | 32.51 |
| ATOM | 3274 | O   | ASP | 623 | 56.635 | 8.435  | 18.025 | 1.00 | 31.80 |
| ATOM | 3275 | N   | LEU | 624 | 56.081 | 8.135  | 20.164 | 1.00 | 31.80 |
| ATOM | 3276 | CA  | LEU | 624 | 56.152 | 6.689  | 20.030 | 1.00 | 31.07 |
| ATOM | 3277 | CB  | LEU | 624 | 56.133 | 6.029  | 21.403 | 1.00 | 28.11 |
| ATOM | 3278 | CG  | LEU | 624 | 55.983 | 4.510  | 21.460 | 1.00 | 27.88 |
| ATOM | 3279 | CD1 | LEU | 624 | 57.108 | 3.809  | 20.700 | 1.00 | 23.96 |
| ATOM | 3280 | CD2 | LEU | 624 | 56.001 | 4.088  | 22.912 | 1.00 | 29.50 |
| ATOM | 3281 | C   | LEU | 624 | 54.954 | 6.238  | 19.187 | 1.00 | 32.04 |
| ATOM | 3282 | O   | LEU | 624 | 53.805 | 6.564  | 19.505 | 1.00 | 36.02 |
| ATOM | 3283 | N   | ALA | 625 | 55.224 | 5.561  | 18.076 | 1.00 | 28.91 |
| ATOM | 3284 | CA  | ALA | 625 | 54.170 | 5.066  | 17.192 | 1.00 | 25.66 |
| ATOM | 3285 | CB  | ALA | 625 | 53.707 | 6.170  | 16.289 | 1.00 | 23.37 |
| ATOM | 3286 | C   | ALA | 625 | 54.800 | 3.948  | 16.389 | 1.00 | 27.71 |
| ATOM | 3287 | O   | ALA | 625 | 56.022 | 3.841  | 16.355 | 1.00 | 29.77 |
| ATOM | 3288 | N   | ALA | 626 | 53.982 | 3.107  | 15.758 | 1.00 | 29.46 |
| ATOM | 3289 | CA  | ALA | 626 | 54.499 | 1.993  | 14.956 | 1.00 | 28.16 |
| ATOM | 3290 | CB  | ALA | 626 | 53.350 | 1.155  | 14.401 | 1.00 | 28.02 |
| ATOM | 3291 | C   | ALA | 626 | 55.366 | 2.504  | 13.831 | 1.00 | 26.78 |
| ATOM | 3292 | O   | ALA | 626 | 56.329 | 1.859  | 13.454 | 1.00 | 26.69 |
| ATOM | 3293 | N   | ARG | 627 | 55.022 | 3.680  | 13.314 | 1.00 | 26.09 |
| ATOM | 3294 | CA  | ARG | 627 | 55.777 | 4.301  | 12.246 | 1.00 | 26.78 |
| ATOM | 3295 | CB  | ARG | 627 | 55.134 | 5.637  | 11.837 | 1.00 | 27.01 |
| ATOM | 3296 | CG  | ARG | 627 | 55.046 | 6.672  | 12.961 | 1.00 | 29.34 |
| ATOM | 3297 | CD  | ARG | 627 | 54.552 | 8.037  | 12.477 | 1.00 | 34.26 |
| ATOM | 3298 | NE  | ARG | 627 | 54.108 | 8.878  | 13.590 | 1.00 | 36.96 |
| ATOM | 3299 | CZ  | ARG | 627 | 52.867 | 8.889  | 14.059 | 1.00 | 40.84 |
| ATOM | 3300 | NH1 | ARG | 627 | 51.942 | 8.114  | 13.515 | 1.00 | 42.56 |
| ATOM | 3301 | NH2 | ARG | 627 | 52.552 | 9.634  | 15.108 | 1.00 | 45.20 |
| ATOM | 3302 | C   | ARG | 627 | 57.209 | 4.549  | 12.711 | 1.00 | 29.11 |
| ATOM | 3303 | O   | ARG | 627 | 58.137 | 4.468  | 11.911 | 1.00 | 30.39 |
| ATOM | 3304 | N   | ASN | 628 | 57.385 | 4.804  | 14.010 | 1.00 | 30.37 |
| ATOM | 3305 | CA  | ASN | 628 | 58.689 | 5.092  | 14.596 | 1.00 | 27.02 |
| ATOM | 3306 | CB  | ASN | 628 | 58.578 | 6.226  | 15.611 | 1.00 | 24.35 |
| ATOM | 3307 | CG  | ASN | 628 | 58.383 | 7.571  | 14.941 | 1.00 | 25.95 |
| ATOM | 3308 | OD1 | ASN | 628 | 58.992 | 7.865  | 13.924 | 1.00 | 32.01 |
| ATOM | 3309 | ND2 | ASN | 628 | 57.522 | 8.391  | 15.503 | 1.00 | 24.34 |
| ATOM | 3310 | C   | ASN | 628 | 59.437 | 3.903  | 15.185 | 1.00 | 26.74 |
| ATOM | 3311 | O   | ASN | 628 | 60.378 | 4.062  | 15.972 | 1.00 | 28.49 |
| ATOM | 3312 | N   | VAL | 629 | 58.998 | 2.712  | 14.802 | 1.00 | 27.34 |
| ATOM | 3313 | CA  | VAL | 629 | 59.621 | 1.450  | 15.224 | 1.00 | 24.94 |
| ATOM | 3314 | CB  | VAL | 629 | 58.589 | 0.522  | 15.906 | 1.00 | 22.20 |
| ATOM | 3315 | CG1 | VAL | 629 | 59.169 | -0.883 | 16.089 | 1.00 | 18.03 |
| ATOM | 3316 | CG2 | VAL | 629 | 58.158 | 1.121  | 17.244 | 1.00 | 18.34 |
| ATOM | 3317 | C   | VAL | 629 | 60.077 | 0.805  | 13.918 | 1.00 | 26.84 |
| ATOM | 3318 | O   | VAL | 629 | 59.284 | 0.679  | 12.978 | 1.00 | 26.50 |
| ATOM | 3319 | N   | LEU | 630 | 61.352 | 0.469  | 13.809 | 1.00 | 27.66 |
| ATOM | 3320 | CA  | LEU | 630 | 61.862 | -0.158 | 12.601 | 1.00 | 30.14 |
| ATOM | 3321 | CB  | LEU | 630 | 63.105 | 0.577  | 12.122 | 1.00 | 28.00 |
| ATOM | 3322 | CG  | LEU | 630 | 62.856 | 2.086  | 12.027 | 1.00 | 26.06 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 3323 | CD1 | LEU | 630 | 64.150 | 2.831   | 11.832 | 1.00 | 23.44 |
| ATOM | 3324 | CD2 | LEU | 630 | 61.880 | 2.381   | 10.901 | 1.00 | 27.72 |
| ATOM | 3325 | C   | LEU | 630 | 62.145 | -1.627  | 12.889 | 1.00 | 32.90 |
| ATOM | 3326 | O   | LEU | 630 | 62.437 | -1.982  | 14.029 | 1.00 | 33.06 |
| ATOM | 3327 | N   | VAL | 631 | 61.991 | -2.478  | 11.873 | 1.00 | 34.83 |
| ATOM | 3328 | CA  | VAL | 631 | 62.195 | -3.928  | 12.006 | 1.00 | 33.02 |
| ATOM | 3329 | CB  | VAL | 631 | 60.915 | -4.700  | 11.584 | 1.00 | 30.92 |
| ATOM | 3330 | CG1 | VAL | 631 | 61.071 | -6.208  | 11.842 | 1.00 | 27.66 |
| ATOM | 3331 | CG2 | VAL | 631 | 59.724 | -4.161  | 12.332 | 1.00 | 24.46 |
| ATOM | 3332 | C   | VAL | 631 | 63.371 | -4.415  | 11.161 | 1.00 | 35.77 |
| ATOM | 3333 | O   | VAL | 631 | 63.428 | -4.171  | 9.954  | 1.00 | 37.57 |
| ATOM | 3334 | N   | THR | 632 | 64.319 | -5.098  | 11.797 | 1.00 | 37.96 |
| ATOM | 3335 | CA  | THR | 632 | 65.511 | -5.599  | 11.096 | 1.00 | 39.06 |
| ATOM | 3336 | CB  | THR | 632 | 66.675 | -5.820  | 12.066 | 1.00 | 35.55 |
| ATOM | 3337 | OG1 | THR | 632 | 66.368 | -6.903  | 12.955 | 1.00 | 35.76 |
| ATOM | 3338 | CG2 | THR | 632 | 66.928 | -4.561  | 12.867 | 1.00 | 35.06 |
| ATOM | 3339 | C   | THR | 632 | 65.283 | -6.893  | 10.331 | 1.00 | 40.66 |
| ATOM | 3340 | O   | THR | 632 | 64.238 | -7.515  | 10.466 | 1.00 | 41.79 |
| ATOM | 3341 | N   | GLU | 633 | 66.282 | -7.307  | 9.556  | 1.00 | 43.40 |
| ATOM | 3342 | CA  | GLU | 633 | 66.219 | -8.540  | 8.768  | 1.00 | 45.33 |
| ATOM | 3343 | CB  | GLU | 633 | 67.501 | -8.689  | 7.942  | 1.00 | 48.67 |
| ATOM | 3344 | CG  | GLU | 633 | 67.496 | -9.791  | 6.864  | 1.00 | 54.70 |
| ATOM | 3345 | CD  | GLU | 633 | 66.599 | -9.506  | 5.647  | 1.00 | 58.16 |
| ATOM | 3346 | OE1 | GLU | 633 | 65.933 | -8.452  | 5.567  | 1.00 | 60.68 |
| ATOM | 3347 | OE2 | GLU | 633 | 66.566 | -10.369 | 4.747  | 1.00 | 60.14 |
| ATOM | 3348 | C   | GLU | 633 | 66.011 | -9.774  | 9.648  | 1.00 | 46.02 |
| ATOM | 3349 | O   | GLU | 633 | 65.637 | -10.834 | 9.156  | 1.00 | 46.75 |
| ATOM | 3350 | N   | ASP | 634 | 66.278 | -9.648  | 10.944 | 1.00 | 46.45 |
| ATOM | 3351 | CA  | ASP | 634 | 65.085 | -10.774 | 11.843 | 1.00 | 46.14 |
| ATOM | 3352 | CB  | ASP | 634 | 67.316 | -10.995 | 12.724 | 1.00 | 52.89 |
| ATOM | 3353 | CG  | ASP | 634 | 68.570 | -11.399 | 11.929 | 1.00 | 59.65 |
| ATOM | 3354 | OD1 | ASP | 634 | 68.593 | -12.499 | 11.328 | 1.00 | 59.91 |
| ATOM | 3355 | OD2 | ASP | 634 | 69.546 | -10.608 | 11.918 | 1.00 | 62.29 |
| ATOM | 3356 | C   | ASP | 634 | 64.850 | -10.549 | 12.708 | 1.00 | 45.75 |
| ATOM | 3357 | O   | ASP | 634 | 64.729 | -11.138 | 13.776 | 1.00 | 46.38 |
| ATOM | 3358 | N   | ASN | 635 | 63.940 | -9.697  | 12.235 | 1.00 | 45.92 |
| ATOM | 3359 | CA  | ASN | 635 | 62.690 | -9.367  | 12.915 | 1.00 | 44.36 |
| ATOM | 3360 | CB  | ASN | 635 | 61.750 | -10.583 | 12.972 | 1.00 | 46.62 |
| ATOM | 3361 | CG  | ASN | 635 | 61.409 | -11.116 | 11.597 | 1.00 | 47.56 |
| ATOM | 3362 | OD1 | ASN | 635 | 60.750 | -10.453 | 10.800 | 1.00 | 50.54 |
| ATOM | 3363 | ND2 | ASN | 635 | 61.876 | -12.314 | 11.305 | 1.00 | 47.75 |
| ATOM | 3364 | C   | ASN | 635 | 62.833 | -8.763  | 14.308 | 1.00 | 42.78 |
| ATOM | 3365 | O   | ASN | 635 | 62.028 | -9.045  | 15.189 | 1.00 | 44.56 |
| ATOM | 3366 | N   | VAL | 636 | 63.849 | -7.927  | 14.503 | 1.00 | 41.03 |
| ATOM | 3367 | CA  | VAL | 636 | 64.071 | -7.291  | 15.797 | 1.00 | 36.87 |
| ATOM | 3368 | CB  | VAL | 636 | 65.584 | -7.162  | 16.083 | 1.00 | 35.99 |
| ATOM | 3369 | CG1 | VAL | 636 | 65.839 | -6.347  | 17.354 | 1.00 | 34.01 |
| ATOM | 3370 | CG2 | VAL | 636 | 66.184 | -8.535  | 16.226 | 1.00 | 33.65 |
| ATOM | 3371 | C   | VAL | 636 | 63.434 | -5.908  | 15.782 | 1.00 | 34.79 |
| ATOM | 3372 | O   | VAL | 636 | 63.657 | -5.131  | 14.854 | 1.00 | 36.58 |
| ATOM | 3373 | N   | MET | 637 | 62.600 | -5.625  | 16.773 | 1.00 | 32.04 |
| ATOM | 3374 | CA  | MET | 637 | 61.940 | -4.331  | 16.887 | 1.00 | 31.14 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3375 | CB  | MET | 637 | 60.734 | -4.427 | 17.817 | 1.00 | 35.49 |
| ATOM | 3376 | CG  | MET | 637 | 59.702 | -5.501 | 17.437 | 1.00 | 37.77 |
| ATOM | 3377 | SD  | MET | 637 | 58.835 | -5.257 | 15.857 | 1.00 | 39.62 |
| ATOM | 3378 | CE  | MET | 637 | 59.122 | -6.864 | 15.035 | 1.00 | 34.87 |
| ATOM | 3379 | C   | MET | 637 | 62.935 | -3.342 | 17.479 | 1.00 | 29.95 |
| ATOM | 3380 | O   | MET | 637 | 63.525 | -3.612 | 18.526 | 1.00 | 26.48 |
| ATOM | 3381 | N   | LYS | 638 | 63.044 | -2.167 | 16.861 | 1.00 | 29.03 |
| ATOM | 3382 | CA  | LYS | 638 | 63.977 | -1.133 | 17.293 | 1.00 | 24.64 |
| ATOM | 3383 | CB  | LYS | 638 | 65.214 | -1.150 | 16.390 | 1.00 | 22.85 |
| ATOM | 3384 | CG  | LYS | 638 | 66.145 | -2.305 | 16.655 | 1.00 | 17.56 |
| ATOM | 3385 | CD  | LYS | 638 | 67.307 | -2.274 | 15.707 | 1.00 | 19.48 |
| ATOM | 3386 | CE  | LYS | 638 | 68.369 | -3.242 | 16.146 | 1.00 | 17.71 |
| ATOM | 3387 | NZ  | LYS | 638 | 68.931 | -2.895 | 17.473 | 1.00 | 24.81 |
| ATOM | 3388 | C   | LYS | 638 | 63.367 | 0.260  | 17.270 | 1.00 | 24.75 |
| ATOM | 3389 | O   | LYS | 638 | 62.987 | 0.740  | 16.203 | 1.00 | 24.35 |
| ATOM | 3390 | N   | ILE | 639 | 63.277 | 0.905  | 18.437 | 1.00 | 24.63 |
| ATOM | 3391 | CA  | ILE | 639 | 62.734 | 2.256  | 18.536 | 1.00 | 24.75 |
| ATOM | 3392 | CB  | ILE | 639 | 62.699 | 2.789  | 19.993 | 1.00 | 23.98 |
| ATOM | 3393 | CG2 | ILE | 639 | 61.916 | 4.094  | 20.046 | 1.00 | 21.11 |
| ATOM | 3394 | CG1 | ILE | 639 | 62.127 | 1.740  | 20.963 | 1.00 | 26.06 |
| ATOM | 3395 | CD1 | ILE | 639 | 60.680 | 1.392  | 20.758 | 1.00 | 28.45 |
| ATOM | 3396 | C   | ILE | 639 | 63.656 | 3.198  | 17.774 | 1.00 | 26.36 |
| ATOM | 3397 | O   | ILE | 639 | 64.884 | 3.161  | 17.947 | 1.00 | 25.06 |
| ATOM | 3398 | N   | ALA | 640 | 63.073 | 4.072  | 16.963 | 1.00 | 26.70 |
| ATOM | 3399 | CA  | ALA | 640 | 63.857 | 5.037  | 16.202 | 1.00 | 27.85 |
| ATOM | 3400 | CB  | ALA | 640 | 63.683 | 4.777  | 14.736 | 1.00 | 27.66 |
| ATOM | 3401 | C   | ALA | 640 | 63.380 | 6.449  | 16.548 | 1.00 | 29.56 |
| ATOM | 3402 | O   | ALA | 640 | 62.307 | 6.608  | 17.136 | 1.00 | 29.82 |
| ATOM | 3403 | N   | ASP | 641 | 64.174 | 7.456  | 16.180 | 1.00 | 28.74 |
| ATOM | 3404 | CA  | ASP | 641 | 63.863 | 8.874  | 16.415 | 1.00 | 32.13 |
| ATOM | 3405 | CB  | ASP | 641 | 62.662 | 9.310  | 15.574 | 1.00 | 35.25 |
| ATOM | 3406 | CG  | ASP | 641 | 63.024 | 9.555  | 14.121 | 1.00 | 38.54 |
| ATOM | 3407 | OD1 | ASP | 641 | 64.149 | 9.170  | 13.716 | 1.00 | 39.85 |
| ATOM | 3408 | OD2 | ASP | 641 | 62.192 | 10.144 | 13.394 | 1.00 | 41.38 |
| ATOM | 3409 | C   | ASP | 641 | 63.661 | 9.311  | 17.862 | 1.00 | 30.61 |
| ATOM | 3410 | O   | ASP | 641 | 63.012 | 10.323 | 18.140 | 1.00 | 29.45 |
| ATOM | 3411 | N   | PHE | 642 | 64.265 | 8.567  | 18.776 | 1.00 | 30.96 |
| ATOM | 3412 | CA  | PHE | 642 | 64.155 | 8.860  | 20.195 | 1.00 | 31.21 |
| ATOM | 3413 | CB  | PHE | 642 | 64.447 | 7.597  | 21.013 | 1.00 | 27.06 |
| ATOM | 3414 | CG  | PHE | 642 | 65.806 | 7.008  | 20.749 | 1.00 | 24.27 |
| ATOM | 3415 | CD1 | PHE | 642 | 66.930 | 7.476  | 21.419 | 1.00 | 22.36 |
| ATOM | 3416 | CD2 | PHE | 642 | 65.962 | 5.978  | 19.838 | 1.00 | 24.87 |
| ATOM | 3417 | CE1 | PHE | 642 | 68.179 | 6.928  | 21.190 | 1.00 | 23.19 |
| ATOM | 3418 | CE2 | PHE | 642 | 67.205 | 5.420  | 19.603 | 1.00 | 23.65 |
| ATOM | 3419 | CZ  | PHE | 642 | 68.323 | 5.898  | 20.282 | 1.00 | 22.95 |
| ATOM | 3420 | C   | PHE | 642 | 65.069 | 10.007 | 20.623 | 1.00 | 34.88 |
| ATOM | 3421 | O   | PHE | 642 | 64.920 | 10.549 | 21.729 | 1.00 | 34.84 |
| ATOM | 3422 | N   | GLY | 643 | 66.000 | 10.377 | 19.737 | 1.00 | 36.20 |
| ATOM | 3423 | CA  | GLY | 643 | 66.934 | 11.450 | 20.032 | 1.00 | 35.47 |
| ATOM | 3424 | C   | GLY | 643 | 66.728 | 12.720 | 19.232 | 1.00 | 37.62 |
| ATOM | 3425 | O   | GLY | 643 | 67.581 | 13.593 | 19.269 | 1.00 | 39.16 |
| ATOM | 3426 | N   | LEU | 644 | 65.609 | 12.837 | 18.517 | 1.00 | 39.68 |

|      |      |     |     |     |        |        |        |      |        |
|------|------|-----|-----|-----|--------|--------|--------|------|--------|
| ATOM | 3427 | CA  | LEU | 644 | 65.328 | 14.029 | 17.712 | 1.00 | 43.09  |
| ATOM | 3428 | CB  | LEU | 644 | 64.074 | 13.843 | 16.860 | 1.00 | 40.78  |
| ATOM | 3429 | CG  | LEU | 644 | 64.076 | 12.876 | 15.681 | 1.00 | 36.94  |
| ATOM | 3430 | CD1 | LEU | 644 | 62.790 | 13.076 | 14.901 | 1.00 | 37.34  |
| ATOM | 3431 | CD2 | LEU | 644 | 65.240 | 13.157 | 14.783 | 1.00 | 37.72  |
| ATOM | 3432 | C   | LEU | 644 | 65.154 | 15.261 | 18.591 | 1.00 | 47.32  |
| ATOM | 3433 | O   | LEU | 644 | 64.639 | 15.170 | 19.702 | 1.00 | 50.33  |
| ATOM | 3434 | N   | ALA | 645 | 65.598 | 16.406 | 18.088 | 1.00 | 51.23  |
| ATOM | 3435 | CA  | ALA | 645 | 65.507 | 17.662 | 18.820 | 1.00 | 52.97  |
| ATOM | 3436 | CB  | ALA | 645 | 66.367 | 18.703 | 18.151 | 1.00 | 54.12  |
| ATOM | 3437 | C   | ALA | 645 | 64.060 | 18.137 | 18.910 | 1.00 | 53.00  |
| ATOM | 3438 | O   | ALA | 645 | 63.591 | 18.528 | 19.977 | 1.00 | 53.59  |
| ATOM | 3439 | N   | ASP | 652 | 52.356 | 21.675 | 14.855 | 1.00 | 79.51  |
| ATOM | 3440 | CA  | ASP | 652 | 51.194 | 21.821 | 13.993 | 1.00 | 78.74  |
| ATOM | 3441 | CB  | ASP | 652 | 51.625 | 22.021 | 12.531 | 1.00 | 78.30  |
| ATOM | 3442 | CG  | ASP | 652 | 50.459 | 22.358 | 11.608 | 1.00 | 77.64  |
| ATOM | 3443 | OD1 | ASP | 652 | 49.473 | 22.968 | 12.079 | 1.00 | 77.67  |
| ATOM | 3444 | OD2 | ASP | 652 | 50.526 | 22.029 | 10.410 | 1.00 | 78.25  |
| ATOM | 3445 | C   | ASP | 652 | 50.339 | 20.569 | 14.125 | 1.00 | 78.92  |
| ATOM | 3446 | O   | ASP | 652 | 50.645 | 19.529 | 13.539 | 1.00 | 79.36  |
| ATOM | 3447 | N   | TYR | 653 | 49.262 | 20.682 | 14.892 | 1.00 | 79.17  |
| ATOM | 3448 | CA  | TYR | 653 | 48.357 | 19.560 | 15.111 | 1.00 | 80.23  |
| ATOM | 3449 | CB  | TYR | 653 | 47.283 | 19.932 | 16.136 | 1.00 | 81.36  |
| ATOM | 3450 | CG  | TYR | 653 | 47.790 | 20.060 | 17.557 | 1.00 | 84.51  |
| ATOM | 3451 | CD1 | TYR | 653 | 46.998 | 20.649 | 18.544 | 1.00 | 86.09  |
| ATOM | 3452 | CE1 | TYR | 653 | 47.443 | 20.751 | 19.865 | 1.00 | 88.05  |
| ATOM | 3453 | CD2 | TYR | 653 | 49.049 | 19.576 | 17.925 | 1.00 | 86.22  |
| ATOM | 3454 | CE2 | TYR | 653 | 49.504 | 19.673 | 19.242 | 1.00 | 87.14  |
| ATOM | 3455 | CZ  | TYR | 653 | 48.698 | 20.260 | 20.207 | 1.00 | 88.37  |
| ATOM | 3456 | OH  | TYR | 653 | 49.146 | 20.351 | 21.510 | 1.00 | 88.82  |
| ATOM | 3457 | C   | TYR | 653 | 47.687 | 19.098 | 13.827 | 1.00 | 80.07  |
| ATOM | 3458 | O   | TYR | 653 | 47.170 | 17.983 | 13.752 | 1.00 | 81.23  |
| ATOM | 3459 | N   | TYR | 654 | 47.716 | 19.953 | 12.813 | 1.00 | 79.01  |
| ATOM | 3460 | CA  | TYR | 654 | 47.082 | 19.640 | 11.544 | 1.00 | 78.81  |
| ATOM | 3461 | CB  | TYR | 654 | 46.378 | 20.884 | 11.008 | 1.00 | 78.48  |
| ATOM | 3462 | CG  | TYR | 654 | 45.358 | 21.422 | 11.982 | 1.00 | 78.53  |
| ATOM | 3463 | CD1 | TYR | 654 | 45.752 | 21.948 | 13.213 | 1.00 | 77.46  |
| ATOM | 3464 | CE1 | TYR | 654 | 44.822 | 22.382 | 14.146 | 1.00 | 78.94  |
| ATOM | 3465 | CD2 | TYR | 654 | 43.997 | 21.350 | 11.704 | 1.00 | 80.18  |
| ATOM | 3466 | CE2 | TYR | 654 | 43.054 | 21.785 | 12.632 | 1.00 | 82.55  |
| ATOM | 3467 | CZ  | TYR | 654 | 43.473 | 22.295 | 13.851 | 1.00 | 80.98  |
| ATOM | 3468 | OH  | TYR | 654 | 42.548 | 22.703 | 14.785 | 1.00 | 82.29  |
| ATOM | 3469 | C   | TYR | 654 | 48.010 | 19.042 | 10.499 | 1.00 | 79.04  |
| ATOM | 3470 | O   | TYR | 654 | 47.575 | 18.720 | 9.393  | 1.00 | 80.09  |
| ATOM | 3471 | N   | LYS | 655 | 49.277 | 18.859 | 10.848 | 1.00 | 78.74  |
| ATOM | 3472 | CA  | LYS | 655 | 50.217 | 18.282 | 9.906  | 1.00 | 80.69  |
| ATOM | 3473 | CB  | LYS | 655 | 51.651 | 18.687 | 10.247 | 1.00 | 83.97  |
| ATOM | 3474 | CG  | LYS | 655 | 52.674 | 18.124 | 9.281  | 1.00 | 89.76  |
| ATOM | 3475 | CD  | LYS | 655 | 54.084 | 18.565 | 9.611  | 1.00 | 93.90  |
| ATOM | 3476 | CE  | LYS | 655 | 55.075 | 17.844 | 8.708  | 1.00 | 97.62  |
| ATOM | 3477 | NZ  | LYS | 655 | 56.489 | 18.177 | 9.038  | 1.00 | 101.35 |
| ATOM | 3478 | C   | LYS | 655 | 50.070 | 16.763 | 9.922  | 1.00 | 80.98  |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3479 | O   | LYS | 655 | 50.187 | 16.130 | 10.975 | 1.00 | 80.95 |
| ATOM | 3480 | N   | LYS | 656 | 49.766 | 16.194 | 8.759  | 1.00 | 81.29 |
| ATOM | 3481 | CA  | LYS | 656 | 49.599 | 14.749 | 8.630  | 1.00 | 81.06 |
| ATOM | 3482 | CB  | LYS | 656 | 48.723 | 14.426 | 7.423  | 1.00 | 81.40 |
| ATOM | 3483 | CG  | LYS | 656 | 47.258 | 14.779 | 7.596  | 1.00 | 81.60 |
| ATOM | 3484 | CD  | LYS | 656 | 46.518 | 14.565 | 6.295  | 1.00 | 84.93 |
| ATOM | 3485 | CE  | LYS | 656 | 45.019 | 14.620 | 6.493  | 1.00 | 87.78 |
| ATOM | 3486 | NZ  | LYS | 656 | 44.291 | 14.565 | 5.183  | 1.00 | 91.78 |
| ATOM | 3487 | C   | LYS | 656 | 50.940 | 14.026 | 8.513  | 1.00 | 80.44 |
| ATOM | 3488 | O   | LYS | 656 | 51.923 | 14.596 | 8.032  | 1.00 | 80.35 |
| ATOM | 3489 | N   | GLY | 660 | 49.197 | 9.779  | 5.831  | 1.00 | 57.41 |
| ATOM | 3490 | CA  | GLY | 660 | 48.231 | 10.860 | 5.961  | 1.00 | 55.59 |
| ATOM | 3491 | C   | GLY | 660 | 47.492 | 10.866 | 7.285  | 1.00 | 53.27 |
| ATOM | 3492 | O   | GLY | 660 | 46.403 | 11.432 | 7.388  | 1.00 | 53.03 |
| ATOM | 3493 | N   | ARG | 661 | 48.080 | 10.222 | 8.288  | 1.00 | 51.92 |
| ATOM | 3494 | CA  | ARG | 661 | 47.477 | 10.155 | 9.617  | 1.00 | 48.40 |
| ATOM | 3495 | CB  | ARG | 661 | 47.900 | 8.861  | 10.338 | 1.00 | 50.20 |
| ATOM | 3496 | CG  | ARG | 661 | 47.612 | 7.566  | 9.563  | 1.00 | 49.76 |
| ATOM | 3497 | CD  | ARG | 661 | 47.801 | 6.331  | 10.456 | 1.00 | 52.48 |
| ATOM | 3498 | NE  | ARG | 661 | 47.691 | 5.061  | 9.734  | 1.00 | 52.60 |
| ATOM | 3499 | CZ  | ARG | 661 | 47.955 | 3.866  | 10.264 | 1.00 | 50.93 |
| ATOM | 3500 | NH1 | ARG | 661 | 48.343 | 3.760  | 11.529 | 1.00 | 48.54 |
| ATOM | 3501 | NH2 | ARG | 661 | 47.836 | 2.772  | 9.523  | 1.00 | 52.75 |
| ATOM | 3502 | C   | ARG | 661 | 47.894 | 11.379 | 10.439 | 1.00 | 43.81 |
| ATOM | 3503 | O   | ARG | 661 | 48.833 | 12.096 | 10.063 | 1.00 | 43.23 |
| ATOM | 3504 | N   | LEU | 662 | 47.194 | 11.618 | 11.537 | 1.00 | 40.56 |
| ATOM | 3505 | CA  | LEU | 662 | 47.496 | 12.735 | 12.428 | 1.00 | 37.52 |
| ATOM | 3506 | CB  | LEU | 662 | 46.220 | 13.496 | 12.789 | 1.00 | 33.26 |
| ATOM | 3507 | CG  | LEU | 662 | 45.485 | 14.281 | 11.696 | 1.00 | 31.29 |
| ATOM | 3508 | CD1 | LEU | 662 | 44.084 | 14.621 | 12.158 | 1.00 | 24.03 |
| ATOM | 3509 | CD2 | LEU | 662 | 46.261 | 15.535 | 11.358 | 1.00 | 28.65 |
| ATOM | 3510 | C   | LEU | 662 | 48.154 | 12.237 | 13.712 | 1.00 | 36.78 |
| ATOM | 3511 | O   | LEU | 662 | 47.515 | 11.570 | 14.536 | 1.00 | 37.27 |
| ATOM | 3512 | N   | PRO | 663 | 49.448 | 12.549 | 13.895 | 1.00 | 36.46 |
| ATOM | 3513 | CD  | PRO | 663 | 50.320 | 13.216 | 12.914 | 1.00 | 38.35 |
| ATOM | 3514 | CA  | PRO | 663 | 50.224 | 12.148 | 15.070 | 1.00 | 35.98 |
| ATOM | 3515 | CB  | PRO | 663 | 51.537 | 12.887 | 14.872 | 1.00 | 34.95 |
| ATOM | 3516 | CG  | PRO | 663 | 51.702 | 12.836 | 13.403 | 1.00 | 39.18 |
| ATOM | 3517 | C   | PRO | 663 | 49.569 | 12.499 | 16.398 | 1.00 | 35.53 |
| ATOM | 3518 | O   | PRO | 663 | 49.779 | 11.814 | 17.399 | 1.00 | 38.34 |
| ATOM | 3519 | N   | VAL | 664 | 48.759 | 13.558 | 16.414 | 1.00 | 32.71 |
| ATOM | 3520 | CA  | VAL | 664 | 48.080 | 13.964 | 17.632 | 1.00 | 30.18 |
| ATOM | 3521 | CB  | VAL | 664 | 47.195 | 15.242 | 17.427 | 1.00 | 31.31 |
| ATOM | 3522 | CG1 | VAL | 664 | 48.060 | 16.409 | 17.038 | 1.00 | 28.93 |
| ATOM | 3523 | CG2 | VAL | 664 | 46.143 | 15.038 | 16.345 | 1.00 | 34.42 |
| ATOM | 3524 | C   | VAL | 664 | 47.268 | 12.787 | 18.172 | 1.00 | 29.48 |
| ATOM | 3525 | O   | VAL | 664 | 47.080 | 12.654 | 19.388 | 1.00 | 30.41 |
| ATOM | 3526 | N   | LYS | 665 | 46.873 | 11.883 | 17.282 | 1.00 | 29.29 |
| ATOM | 3527 | CA  | LYS | 665 | 46.105 | 10.704 | 17.668 | 1.00 | 28.55 |
| ATOM | 3528 | CB  | LYS | 665 | 45.517 | 10.037 | 16.423 | 1.00 | 26.97 |
| ATOM | 3529 | CG  | LYS | 665 | 44.415 | 10.873 | 15.786 | 1.00 | 27.88 |
| ATOM | 3530 | CD  | LYS | 665 | 43.979 | 10.366 | 14.418 | 1.00 | 29.41 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3531 | CE  | LYS | 665 | 42.785 | 11.162 | 13.899 | 1.00 | 26.35 |
| ATOM | 3532 | NZ  | LYS | 665 | 42.363 | 10.809 | 12.508 | 1.00 | 26.16 |
| ATOM | 3533 | C   | LYS | 665 | 46.890 | 9.730  | 18.556 | 1.00 | 28.81 |
| ATOM | 3534 | O   | LYS | 665 | 46.315 | 8.802  | 19.113 | 1.00 | 29.38 |
| ATOM | 3535 | N   | TRP | 666 | 48.181 | 9.976  | 18.736 | 1.00 | 28.98 |
| ATOM | 3536 | CA  | TRP | 666 | 49.005 | 9.128  | 19.599 | 1.00 | 31.67 |
| ATOM | 3537 | CB  | TRP | 666 | 50.323 | 8.755  | 18.913 | 1.00 | 29.46 |
| ATOM | 3538 | CG  | TRP | 666 | 50.205 | 7.582  | 17.977 | 1.00 | 28.92 |
| ATOM | 3539 | CD2 | TRP | 666 | 49.676 | 7.603  | 16.642 | 1.00 | 27.62 |
| ATOM | 3540 | CE2 | TRP | 666 | 49.740 | 6.276  | 16.162 | 1.00 | 27.15 |
| ATOM | 3541 | CE3 | TRP | 666 | 49.151 | 8.607  | 15.818 | 1.00 | 25.27 |
| ATOM | 3542 | CD1 | TRP | 666 | 50.565 | 6.289  | 18.238 | 1.00 | 24.30 |
| ATOM | 3543 | NE1 | TRP | 666 | 50.287 | 5.506  | 17.147 | 1.00 | 27.82 |
| ATOM | 3544 | CZ2 | TRP | 666 | 49.295 | 5.930  | 14.872 | 1.00 | 26.95 |
| ATOM | 3545 | CZ3 | TRP | 666 | 48.707 | 8.256  | 14.536 | 1.00 | 25.95 |
| ATOM | 3546 | CH2 | TRP | 666 | 48.778 | 6.929  | 14.081 | 1.00 | 28.35 |
| ATOM | 3547 | C   | TRP | 666 | 49.316 | 9.836  | 20.907 | 1.00 | 33.46 |
| ATOM | 3548 | O   | TRP | 666 | 49.790 | 9.219  | 21.867 | 1.00 | 34.77 |
| ATOM | 3549 | N   | MET | 667 | 49.021 | 11.128 | 20.947 | 1.00 | 35.61 |
| ATOM | 3550 | CA  | MET | 667 | 49.306 | 11.948 | 22.110 | 1.00 | 37.94 |
| ATOM | 3551 | CB  | MET | 667 | 49.308 | 13.419 | 21.723 | 1.00 | 40.22 |
| ATOM | 3552 | CG  | MET | 667 | 50.606 | 13.939 | 21.150 | 1.00 | 40.77 |
| ATOM | 3553 | SD  | MET | 667 | 50.479 | 15.723 | 20.906 | 1.00 | 44.04 |
| ATOM | 3554 | CE  | MET | 667 | 50.932 | 15.858 | 19.204 | 1.00 | 39.07 |
| ATOM | 3555 | C   | MET | 667 | 48.432 | 11.775 | 23.346 | 1.00 | 39.61 |
| ATOM | 3556 | O   | MET | 667 | 47.211 | 11.672 | 23.255 | 1.00 | 42.46 |
| ATOM | 3557 | N   | ALA | 668 | 49.072 | 11.820 | 24.505 | 1.00 | 38.46 |
| ATOM | 3558 | CA  | ALA | 668 | 48.383 | 11.704 | 25.773 | 1.00 | 37.78 |
| ATOM | 3559 | CB  | ALA | 668 | 49.388 | 11.473 | 26.894 | 1.00 | 38.21 |
| ATOM | 3560 | C   | ALA | 668 | 47.666 | 13.033 | 25.966 | 1.00 | 37.46 |
| ATOM | 3561 | O   | ALA | 668 | 48.156 | 14.072 | 25.521 | 1.00 | 35.74 |
| ATOM | 3562 | N   | PRO | 669 | 46.521 | 13.027 | 26.665 | 1.00 | 37.55 |
| ATOM | 3563 | CD  | PRO | 669 | 45.868 | 11.840 | 27.243 | 1.00 | 38.19 |
| ATOM | 3564 | CA  | PRO | 669 | 45.723 | 14.229 | 26.923 | 1.00 | 39.30 |
| ATOM | 3565 | CB  | PRO | 669 | 44.638 | 13.708 | 27.864 | 1.00 | 39.82 |
| ATOM | 3566 | CG  | PRO | 669 | 44.444 | 12.301 | 27.379 | 1.00 | 39.13 |
| ATOM | 3567 | C   | PRO | 669 | 46.517 | 15.391 | 27.535 | 1.00 | 40.55 |
| ATOM | 3568 | O   | PRO | 669 | 46.442 | 16.523 | 27.056 | 1.00 | 39.87 |
| ATOM | 3569 | N   | GLU | 670 | 47.303 | 15.113 | 28.569 | 1.00 | 41.15 |
| ATOM | 3570 | CA  | GLU | 670 | 48.096 | 16.169 | 29.200 | 1.00 | 42.80 |
| ATOM | 3571 | CB  | GLU | 670 | 48.776 | 15.657 | 30.464 | 1.00 | 42.97 |
| ATOM | 3572 | CG  | GLU | 670 | 49.928 | 14.705 | 30.205 | 1.00 | 42.82 |
| ATOM | 3573 | CD  | GLU | 670 | 49.506 | 13.252 | 30.150 | 1.00 | 44.16 |
| ATOM | 3574 | OE1 | GLU | 670 | 50.395 | 12.384 | 30.257 | 1.00 | 40.43 |
| ATOM | 3575 | OE2 | GLU | 670 | 48.297 | 12.974 | 30.013 | 1.00 | 46.36 |
| ATOM | 3576 | C   | GLU | 670 | 49.145 | 16.795 | 28.276 | 1.00 | 43.00 |
| ATOM | 3577 | O   | GLU | 670 | 49.435 | 17.979 | 28.380 | 1.00 | 40.37 |
| ATOM | 3578 | N   | ALA | 671 | 49.697 | 15.999 | 27.367 | 1.00 | 44.03 |
| ATOM | 3579 | CA  | ALA | 671 | 50.708 | 16.495 | 26.440 | 1.00 | 44.90 |
| ATOM | 3580 | CB  | ALA | 671 | 51.460 | 15.333 | 25.814 | 1.00 | 42.47 |
| ATOM | 3581 | C   | ALA | 671 | 50.063 | 17.364 | 25.361 | 1.00 | 47.79 |
| ATOM | 3582 | O   | ALA | 671 | 50.602 | 18.398 | 24.977 | 1.00 | 47.27 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3583 | N   | LEU | 672 | 48.877 | 16.952 | 24.922 | 1.00 | 51.20 |
| ATOM | 3584 | CA  | LEU | 672 | 48.131 | 17.650 | 23.881 | 1.00 | 52.90 |
| ATOM | 3585 | CB  | LEU | 672 | 47.092 | 16.685 | 23.288 | 1.00 | 54.84 |
| ATOM | 3586 | CG  | LEU | 672 | 46.307 | 17.010 | 22.015 | 1.00 | 57.19 |
| ATOM | 3587 | CD1 | LEU | 672 | 47.230 | 17.328 | 20.869 | 1.00 | 57.53 |
| ATOM | 3588 | CD2 | LEU | 672 | 45.443 | 15.813 | 21.659 | 1.00 | 56.95 |
| ATOM | 3589 | C   | LEU | 672 | 47.456 | 18.913 | 24.445 | 1.00 | 53.45 |
| ATOM | 3590 | O   | LEU | 672 | 47.502 | 19.988 | 23.841 | 1.00 | 52.71 |
| ATOM | 3591 | N   | PHE | 673 | 46.866 | 18.777 | 25.627 | 1.00 | 53.82 |
| ATOM | 3592 | CA  | PHE | 673 | 46.179 | 19.878 | 26.281 | 1.00 | 55.95 |
| ATOM | 3593 | CB  | PHE | 673 | 44.974 | 19.340 | 27.060 | 1.00 | 53.37 |
| ATOM | 3594 | CG  | PHE | 673 | 43.967 | 18.612 | 26.200 | 1.00 | 52.79 |
| ATOM | 3595 | CD1 | PHE | 673 | 43.477 | 17.368 | 26.580 | 1.00 | 54.64 |
| ATOM | 3596 | CD2 | PHE | 673 | 43.491 | 19.173 | 25.022 | 1.00 | 53.89 |
| ATOM | 3597 | CE1 | PHE | 673 | 42.530 | 16.702 | 25.808 | 1.00 | 55.44 |
| ATOM | 3598 | CE2 | PHE | 673 | 42.540 | 18.507 | 24.239 | 1.00 | 54.80 |
| ATOM | 3599 | CZ  | PHE | 673 | 42.062 | 17.269 | 24.637 | 1.00 | 54.86 |
| ATOM | 3600 | C   | PHE | 673 | 47.071 | 20.733 | 27.200 | 1.00 | 58.97 |
| ATOM | 3601 | O   | PHE | 673 | 47.084 | 21.959 | 27.095 | 1.00 | 60.79 |
| ATOM | 3602 | N   | ASP | 674 | 47.832 | 20.086 | 28.077 | 1.00 | 60.63 |
| ATOM | 3603 | CA  | ASP | 674 | 48.698 | 20.798 | 29.026 | 1.00 | 61.52 |
| ATOM | 3604 | CB  | ASP | 674 | 48.638 | 20.137 | 30.410 | 1.00 | 61.39 |
| ATOM | 3605 | CG  | ASP | 674 | 47.247 | 20.143 | 31.010 | 1.00 | 62.87 |
| ATOM | 3606 | OD1 | ASP | 674 | 46.706 | 19.039 | 31.246 | 1.00 | 62.99 |
| ATOM | 3607 | OD2 | ASP | 674 | 46.698 | 21.239 | 31.253 | 1.00 | 63.55 |
| ATOM | 3608 | C   | ASP | 674 | 50.176 | 20.998 | 28.618 | 1.00 | 61.58 |
| ATOM | 3609 | O   | ASP | 674 | 51.014 | 21.284 | 29.446 | 1.00 | 60.41 |
| ATOM | 3610 | N   | ARG | 675 | 50.499 | 20.519 | 27.380 | 1.00 | 61.38 |
| ATOM | 3611 | CA  | ARG | 675 | 51.885 | 20.526 | 26.883 | 1.00 | 59.23 |
| ATOM | 3612 | CB  | ARG | 675 | 52.336 | 21.944 | 26.515 | 1.00 | 59.05 |
| ATOM | 3613 | CG  | ARG | 675 | 51.548 | 22.564 | 25.367 | 1.00 | 64.48 |
| ATOM | 3614 | CD  | ARG | 675 | 52.036 | 23.967 | 25.014 | 1.00 | 68.61 |
| ATOM | 3615 | NE  | ARG | 675 | 53.348 | 23.969 | 24.359 | 1.00 | 69.16 |
| ATOM | 3616 | CZ  | ARG | 675 | 54.076 | 25.061 | 24.145 | 1.00 | 68.19 |
| ATOM | 3617 | NH1 | ARG | 675 | 53.622 | 26.250 | 24.531 | 1.00 | 66.97 |
| ATOM | 3618 | NH2 | ARG | 675 | 55.265 | 24.965 | 23.564 | 1.00 | 67.00 |
| ATOM | 3619 | C   | ARG | 675 | 52.849 | 19.885 | 27.892 | 1.00 | 57.27 |
| ATOM | 3620 | O   | ARG | 675 | 54.002 | 20.300 | 28.033 | 1.00 | 57.05 |
| ATOM | 3621 | N   | ILE | 676 | 52.356 | 18.867 | 28.591 | 1.00 | 55.44 |
| ATOM | 3622 | CA  | ILE | 676 | 53.136 | 18.140 | 29.589 | 1.00 | 53.31 |
| ATOM | 3623 | CB  | ILE | 676 | 52.314 | 17.899 | 30.874 | 1.00 | 50.96 |
| ATOM | 3624 | CG2 | ILE | 676 | 52.934 | 16.787 | 31.718 | 1.00 | 47.57 |
| ATOM | 3625 | CG1 | ILE | 676 | 52.213 | 19.196 | 31.669 | 1.00 | 50.88 |
| ATOM | 3626 | CD1 | ILE | 676 | 51.443 | 19.073 | 32.964 | 1.00 | 53.09 |
| ATOM | 3627 | C   | ILE | 676 | 53.608 | 16.801 | 29.029 | 1.00 | 54.75 |
| ATOM | 3628 | O   | ILE | 676 | 52.810 | 15.891 | 28.824 | 1.00 | 57.06 |
| ATOM | 3629 | N   | TYR | 677 | 54.902 | 16.681 | 28.777 | 1.00 | 53.61 |
| ATOM | 3630 | CA  | TYR | 677 | 55.459 | 15.447 | 28.243 | 1.00 | 52.80 |
| ATOM | 3631 | CB  | TYR | 677 | 56.332 | 15.747 | 27.023 | 1.00 | 53.40 |
| ATOM | 3632 | CG  | TYR | 677 | 55.554 | 16.184 | 25.794 | 1.00 | 57.32 |
| ATOM | 3633 | CD1 | TYR | 677 | 55.256 | 17.535 | 25.575 | 1.00 | 55.94 |
| ATOM | 3634 | CE1 | TYR | 677 | 54.574 | 17.946 | 24.436 | 1.00 | 54.18 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3635 | CD2 | TYR | 677 | 55.140 | 15.251 | 24.829 | 1.00 | 56.63 |
| ATOM | 3636 | CE2 | TYR | 677 | 54.459 | 15.654 | 23.680 | 1.00 | 54.84 |
| ATOM | 3637 | CZ  | TYR | 677 | 54.183 | 17.004 | 23.490 | 1.00 | 56.38 |
| ATOM | 3638 | OH  | TYR | 677 | 53.555 | 17.426 | 22.340 | 1.00 | 57.46 |
| ATOM | 3639 | C   | TYR | 677 | 56.268 | 14.713 | 29.304 | 1.00 | 51.49 |
| ATOM | 3640 | O   | TYR | 677 | 57.186 | 15.283 | 29.904 | 1.00 | 52.65 |
| ATOM | 3641 | N   | THR | 678 | 55.881 | 13.471 | 29.579 | 1.00 | 48.54 |
| ATOM | 3642 | CA  | THR | 678 | 56.571 | 12.648 | 30.568 | 1.00 | 46.14 |
| ATOM | 3643 | CB  | THR | 678 | 55.776 | 12.597 | 31.910 | 1.00 | 47.34 |
| ATOM | 3644 | OG1 | THR | 678 | 54.615 | 11.764 | 31.764 | 1.00 | 50.96 |
| ATOM | 3645 | CG2 | THR | 678 | 55.346 | 13.996 | 32.345 | 1.00 | 47.47 |
| ATOM | 3646 | C   | THR | 678 | 56.742 | 11.218 | 30.041 | 1.00 | 43.21 |
| ATOM | 3647 | O   | THR | 678 | 56.371 | 10.917 | 28.912 | 1.00 | 41.64 |
| ATOM | 3648 | N   | HIS | 679 | 57.334 | 10.351 | 30.854 | 1.00 | 42.21 |
| ATOM | 3649 | CA  | HIS | 679 | 57.507 | 8.969  | 30.456 | 1.00 | 39.96 |
| ATOM | 3650 | CB  | HIS | 679 | 58.410 | 8.216  | 31.428 | 1.00 | 39.23 |
| ATOM | 3651 | CG  | HIS | 679 | 59.833 | 8.677  | 31.418 | 1.00 | 43.24 |
| ATOM | 3652 | CD2 | HIS | 679 | 60.501 | 9.505  | 32.253 | 1.00 | 43.12 |
| ATOM | 3653 | ND1 | HIS | 679 | 60.759 | 8.236  | 30.498 | 1.00 | 42.63 |
| ATOM | 3654 | CE1 | HIS | 679 | 61.938 | 8.762  | 30.774 | 1.00 | 42.66 |
| ATOM | 3655 | NE2 | HIS | 679 | 61.807 | 9.539  | 31.832 | 1.00 | 43.80 |
| ATOM | 3656 | C   | HIS | 679 | 56.145 | 8.301  | 30.429 | 1.00 | 40.78 |
| ATOM | 3657 | O   | HIS | 679 | 55.930 | 7.358  | 29.678 | 1.00 | 42.66 |
| ATOM | 3658 | N   | GLN | 680 | 55.227 | 8.803  | 31.254 | 1.00 | 40.26 |
| ATOM | 3659 | CA  | GLN | 680 | 53.881 | 8.261  | 31.324 | 1.00 | 39.10 |
| ATOM | 3660 | CB  | GLN | 680 | 53.187 | 8.664  | 32.625 | 1.00 | 39.23 |
| ATOM | 3661 | CG  | GLN | 680 | 53.762 | 7.980  | 33.874 | 1.00 | 41.07 |
| ATOM | 3662 | CD  | GLN | 680 | 53.813 | 6.450  | 33.770 | 1.00 | 39.96 |
| ATOM | 3663 | OE1 | GLN | 680 | 52.818 | 5.762  | 33.993 | 1.00 | 39.53 |
| ATOM | 3664 | NE2 | GLN | 680 | 54.990 | 5.919  | 33.464 | 1.00 | 32.85 |
| ATOM | 3665 | C   | GLN | 680 | 53.070 | 8.676  | 30.103 | 1.00 | 39.20 |
| ATOM | 3666 | O   | GLN | 680 | 52.194 | 7.933  | 29.656 | 1.00 | 39.29 |
| ATOM | 3667 | N   | SER | 681 | 53.368 | 9.843  | 29.531 | 1.00 | 38.01 |
| ATOM | 3668 | CA  | SER | 681 | 52.656 | 10.264 | 28.325 | 1.00 | 39.27 |
| ATOM | 3669 | CB  | SER | 681 | 52.979 | 11.712 | 27.968 | 1.00 | 40.93 |
| ATOM | 3670 | OG  | SER | 681 | 54.366 | 11.936 | 27.943 | 1.00 | 39.70 |
| ATOM | 3671 | C   | SER | 681 | 53.090 | 9.309  | 27.208 | 1.00 | 39.93 |
| ATOM | 3672 | O   | SER | 681 | 52.285 | 8.953  | 26.335 | 1.00 | 40.46 |
| ATOM | 3673 | N   | ASP | 682 | 54.356 | 8.881  | 27.269 | 1.00 | 37.28 |
| ATOM | 3674 | CA  | ASP | 682 | 54.920 | 7.921  | 26.315 | 1.00 | 35.38 |
| ATOM | 3675 | CB  | ASP | 682 | 56.411 | 7.673  | 26.586 | 1.00 | 33.58 |
| ATOM | 3676 | CG  | ASP | 682 | 57.332 | 8.520  | 25.717 | 1.00 | 33.16 |
| ATOM | 3677 | OD1 | ASP | 682 | 58.545 | 8.283  | 25.828 | 1.00 | 31.76 |
| ATOM | 3678 | OD2 | ASP | 682 | 56.886 | 9.391  | 24.936 | 1.00 | 30.06 |
| ATOM | 3679 | C   | ASP | 682 | 54.178 | 6.599  | 26.463 | 1.00 | 34.70 |
| ATOM | 3680 | O   | ASP | 682 | 54.012 | 5.868  | 25.488 | 1.00 | 35.67 |
| ATOM | 3681 | N   | VAL | 683 | 53.758 | 6.296  | 27.691 | 1.00 | 34.44 |
| ATOM | 3682 | CA  | VAL | 683 | 53.011 | 5.072  | 27.987 | 1.00 | 35.14 |
| ATOM | 3683 | CB  | VAL | 683 | 52.895 | 4.852  | 29.544 | 1.00 | 35.48 |
| ATOM | 3684 | CG1 | VAL | 683 | 51.752 | 3.900  | 29.890 | 1.00 | 34.95 |
| ATOM | 3685 | CG2 | VAL | 683 | 54.202 | 4.282  | 30.080 | 1.00 | 28.77 |
| ATOM | 3686 | C   | VAL | 683 | 51.638 | 5.091  | 27.279 | 1.00 | 32.81 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3687 | O   | VAL | 683 | 51.173 | 4.050  | 26.801 | 1.00 | 31.24 |
| ATOM | 3688 | N   | TRP | 684 | 51.018 | 6.271  | 27.187 | 1.00 | 30.88 |
| ATOM | 3689 | CA  | TRP | 684 | 49.731 | 6.426  | 26.502 | 1.00 | 31.79 |
| ATOM | 3690 | CB  | TRP | 684 | 49.189 | 7.849  | 26.679 | 1.00 | 34.88 |
| ATOM | 3691 | CG  | TRP | 684 | 47.972 | 8.173  | 25.833 | 1.00 | 37.61 |
| ATOM | 3692 | CD2 | TRP | 684 | 46.635 | 8.396  | 26.305 | 1.00 | 39.13 |
| ATOM | 3693 | CE2 | TRP | 684 | 45.851 | 8.741  | 25.184 | 1.00 | 38.42 |
| ATOM | 3694 | CE3 | TRP | 684 | 46.024 | 8.349  | 27.567 | 1.00 | 39.05 |
| ATOM | 3695 | CD1 | TRP | 684 | 47.938 | 8.374  | 24.476 | 1.00 | 36.48 |
| ATOM | 3696 | NE1 | TRP | 684 | 46.669 | 8.720  | 24.085 | 1.00 | 38.70 |
| ATOM | 3697 | CZ2 | TRP | 684 | 44.483 | 9.036  | 25.290 | 1.00 | 37.82 |
| ATOM | 3698 | CZ3 | TRP | 684 | 44.668 | 8.644  | 27.664 | 1.00 | 38.19 |
| ATOM | 3699 | CH2 | TRP | 684 | 43.918 | 8.980  | 26.536 | 1.00 | 37.68 |
| ATOM | 3700 | C   | TRP | 684 | 49.947 | 6.131  | 25.020 | 1.00 | 31.09 |
| ATOM | 3701 | O   | TRP | 684 | 49.214 | 5.332  | 24.430 | 1.00 | 32.25 |
| ATOM | 3702 | N   | SER | 685 | 50.977 | 6.750  | 24.444 | 1.00 | 28.90 |
| ATOM | 3703 | CA  | SER | 685 | 51.345 | 6.536  | 23.052 | 1.00 | 27.10 |
| ATOM | 3704 | CB  | SER | 685 | 52.620 | 7.312  | 22.748 | 1.00 | 23.88 |
| ATOM | 3705 | OG  | SER | 685 | 52.459 | 8.710  | 22.974 | 1.00 | 25.82 |
| ATOM | 3706 | C   | SER | 685 | 51.567 | 5.028  | 22.786 | 1.00 | 27.85 |
| ATOM | 3707 | O   | SER | 685 | 51.172 | 4.493  | 21.746 | 1.00 | 28.89 |
| ATOM | 3708 | N   | PHE | 686 | 52.178 | 4.334  | 23.741 | 1.00 | 28.84 |
| ATOM | 3709 | CA  | PHE | 686 | 52.410 | 2.893  | 23.622 | 1.00 | 27.86 |
| ATOM | 3710 | CB  | PHE | 686 | 53.255 | 2.403  | 24.800 | 1.00 | 28.14 |
| ATOM | 3711 | CG  | PHE | 686 | 53.498 | 0.914  | 24.803 | 1.00 | 28.41 |
| ATOM | 3712 | CD1 | PHE | 686 | 54.256 | 0.313  | 23.802 | 1.00 | 27.54 |
| ATOM | 3713 | CD2 | PHE | 686 | 52.949 | 0.109  | 25.736 | 1.00 | 29.15 |
| ATOM | 3714 | CE1 | PHE | 686 | 54.465 | -1.057 | 23.792 | 1.00 | 24.25 |
| ATOM | 3715 | CE2 | PHE | 686 | 53.151 | -1.268 | 25.790 | 1.00 | 27.86 |
| ATOM | 3716 | CZ  | PHE | 686 | 53.912 | -1.850 | 24.782 | 1.00 | 26.09 |
| ATOM | 3717 | C   | PHE | 686 | 51.072 | 2.122  | 23.566 | 1.00 | 30.99 |
| ATOM | 3718 | O   | PHE | 686 | 50.960 | 1.109  | 22.873 | 1.00 | 29.21 |
| ATOM | 3719 | N   | GLY | 687 | 50.051 | 2.603  | 24.286 | 1.00 | 30.57 |
| ATOM | 3720 | CA  | GLY | 687 | 48.758 | 1.939  | 24.273 | 1.00 | 31.78 |
| ATOM | 3721 | C   | GLY | 687 | 48.202 | 1.923  | 22.862 | 1.00 | 32.51 |
| ATOM | 3722 | O   | GLY | 687 | 47.687 | 0.908  | 22.373 | 1.00 | 31.25 |
| ATOM | 3723 | N   | VAL | 688 | 48.292 | 3.073  | 22.204 | 1.00 | 32.58 |
| ATOM | 3724 | CA  | VAL | 688 | 47.825 | 3.202  | 20.827 | 1.00 | 30.66 |
| ATOM | 3725 | CB  | VAL | 688 | 47.804 | 4.684  | 20.362 | 1.00 | 28.55 |
| ATOM | 3726 | CG1 | VAL | 688 | 47.231 | 4.795  | 18.950 | 1.00 | 27.25 |
| ATOM | 3727 | CG2 | VAL | 688 | 46.944 | 5.522  | 21.320 | 1.00 | 27.12 |
| ATOM | 3728 | C   | VAL | 688 | 48.684 | 2.326  | 19.910 | 1.00 | 29.96 |
| ATOM | 3729 | O   | VAL | 688 | 48.160 | 1.731  | 18.974 | 1.00 | 30.83 |
| ATOM | 3730 | N   | LEU | 689 | 49.973 | 2.202  | 20.219 | 1.00 | 30.02 |
| ATOM | 3731 | CA  | LEU | 689 | 50.893 | 1.371  | 19.430 | 1.00 | 30.48 |
| ATOM | 3732 | CB  | LEU | 689 | 52.359 | 1.571  | 19.877 | 1.00 | 28.13 |
| ATOM | 3733 | CG  | LEU | 689 | 53.466 | 0.966  | 18.995 | 1.00 | 26.34 |
| ATOM | 3734 | CD1 | LEU | 689 | 54.790 | 1.697  | 19.174 | 1.00 | 25.54 |
| ATOM | 3735 | CD2 | LEU | 689 | 53.628 | -0.505 | 19.264 | 1.00 | 24.99 |
| ATOM | 3736 | C   | LEU | 689 | 50.479 | -0.096 | 19.567 | 1.00 | 30.54 |
| ATOM | 3737 | O   | LEU | 689 | 50.540 | -0.849 | 18.602 | 1.00 | 27.86 |
| ATOM | 3738 | N   | LEU | 690 | 50.013 | -0.468 | 20.759 | 1.00 | 33.73 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3739 | CA  | LEU | 690 | 49.553 | -1.830 | 21.029 | 1.00 | 32.47 |
| ATOM | 3740 | CB  | LEU | 690 | 49.141 | -1.982 | 22.496 | 1.00 | 31.82 |
| ATOM | 3741 | CG  | LEU | 690 | 50.136 | -2.220 | 23.634 | 1.00 | 29.71 |
| ATOM | 3742 | CD1 | LEU | 690 | 49.396 | -2.129 | 24.956 | 1.00 | 31.53 |
| ATOM | 3743 | CD2 | LEU | 690 | 50.771 | -3.605 | 23.483 | 1.00 | 31.69 |
| ATOM | 3744 | C   | LEU | 690 | 48.335 | -2.101 | 20.136 | 1.00 | 33.01 |
| ATOM | 3745 | O   | LEU | 690 | 48.223 | -3.168 | 19.521 | 1.00 | 32.68 |
| ATOM | 3746 | N   | TRP | 691 | 47.423 | -1.131 | 20.089 | 1.00 | 32.37 |
| ATOM | 3747 | CA  | TRP | 691 | 46.230 | -1.215 | 19.256 | 1.00 | 32.11 |
| ATOM | 3748 | CB  | TRP | 691 | 45.424 | 0.083  | 19.373 | 1.00 | 33.19 |
| ATOM | 3749 | CG  | TRP | 691 | 44.086 | 0.055  | 18.678 | 1.00 | 33.95 |
| ATOM | 3750 | CD2 | TRP | 691 | 43.812 | 0.469  | 17.337 | 1.00 | 30.48 |
| ATOM | 3751 | CE2 | TRP | 691 | 42.434 | 0.294  | 17.118 | 1.00 | 32.75 |
| ATOM | 3752 | CE3 | TRP | 691 | 44.599 | 0.989  | 16.301 | 1.00 | 29.47 |
| ATOM | 3753 | CD1 | TRP | 691 | 42.889 | -0.352 | 19.199 | 1.00 | 34.34 |
| ATOM | 3754 | NE1 | TRP | 691 | 41.894 | -0.211 | 18.272 | 1.00 | 36.53 |
| ATOM | 3755 | CZ2 | TRP | 691 | 41.831 | 0.601  | 15.900 | 1.00 | 30.85 |
| ATOM | 3756 | CZ3 | TRP | 691 | 44.003 | 1.289  | 15.100 | 1.00 | 30.51 |
| ATOM | 3757 | CH2 | TRP | 691 | 42.630 | 1.104  | 14.907 | 1.00 | 30.29 |
| ATOM | 3758 | C   | TRP | 691 | 46.661 | -1.421 | 17.805 | 1.00 | 31.49 |
| ATOM | 3759 | O   | TRP | 691 | 46.062 | -2.221 | 17.092 | 1.00 | 31.20 |
| ATOM | 3760 | N   | GLU | 692 | 47.669 | -0.656 | 17.374 | 1.00 | 32.90 |
| ATOM | 3761 | CA  | GLU | 692 | 48.207 | -0.734 | 16.019 | 1.00 | 29.78 |
| ATOM | 3762 | CB  | GLU | 692 | 49.383 | 0.233  | 15.809 | 1.00 | 25.56 |
| ATOM | 3763 | CG  | GLU | 692 | 49.009 | 1.696  | 15.713 | 1.00 | 25.85 |
| ATOM | 3764 | CD  | GLU | 692 | 50.195 | 2.570  | 15.363 | 1.00 | 27.76 |
| ATOM | 3765 | OE1 | GLU | 692 | 51.001 | 2.850  | 16.265 | 1.00 | 29.52 |
| ATOM | 3766 | OE2 | GLU | 692 | 50.333 | 2.981  | 14.191 | 1.00 | 26.84 |
| ATOM | 3767 | C   | GLU | 692 | 48.682 | -2.136 | 15.696 | 1.00 | 31.08 |
| ATOM | 3768 | O   | GLU | 692 | 48.545 | -2.593 | 14.553 | 1.00 | 32.57 |
| ATOM | 3769 | N   | ILE | 693 | 49.262 | -2.804 | 16.689 | 1.00 | 31.81 |
| ATOM | 3770 | CA  | ILE | 693 | 49.774 | -4.163 | 16.506 | 1.00 | 31.87 |
| ATOM | 3771 | CB  | ILE | 693 | 50.666 | -4.614 | 17.699 | 1.00 | 33.50 |
| ATOM | 3772 | CG2 | ILE | 693 | 51.140 | -6.075 | 17.513 | 1.00 | 33.06 |
| ATOM | 3773 | CG1 | ILE | 693 | 51.879 | -3.703 | 17.827 | 1.00 | 34.04 |
| ATOM | 3774 | CD1 | ILE | 693 | 52.744 | -4.008 | 19.025 | 1.00 | 31.52 |
| ATOM | 3775 | C   | ILE | 693 | 48.643 | -5.177 | 16.335 | 1.00 | 31.43 |
| ATOM | 3776 | O   | ILE | 693 | 48.633 | -5.982 | 15.403 | 1.00 | 29.55 |
| ATOM | 3777 | N   | PHE | 694 | 47.654 | -5.087 | 17.207 | 1.00 | 33.58 |
| ATOM | 3778 | CA  | PHE | 694 | 46.550 | -6.027 | 17.178 | 1.00 | 36.72 |
| ATOM | 3779 | CB  | PHE | 694 | 45.980 | -6.179 | 18.589 | 1.00 | 36.27 |
| ATOM | 3780 | CG  | PHE | 694 | 46.988 | -6.724 | 19.547 | 1.00 | 34.29 |
| ATOM | 3781 | CD1 | PHE | 694 | 47.500 | -5.949 | 20.581 | 1.00 | 34.95 |
| ATOM | 3782 | CD2 | PHE | 694 | 47.560 | -7.972 | 19.297 | 1.00 | 31.60 |
| ATOM | 3783 | CE1 | PHE | 694 | 48.576 | -6.413 | 21.344 | 1.00 | 35.73 |
| ATOM | 3784 | CE2 | PHE | 694 | 48.633 | -8.443 | 20.049 | 1.00 | 31.12 |
| ATOM | 3785 | CZ  | PHE | 694 | 49.149 | -7.661 | 21.066 | 1.00 | 33.97 |
| ATOM | 3786 | C   | PHE | 694 | 45.516 | -5.870 | 16.065 | 1.00 | 37.70 |
| ATOM | 3787 | O   | PHE | 694 | 44.684 | -6.756 | 15.839 | 1.00 | 37.99 |
| ATOM | 3788 | N   | THR | 695 | 45.604 | -4.745 | 15.355 | 1.00 | 36.11 |
| ATOM | 3789 | CA  | THR | 695 | 44.747 | -4.485 | 14.205 | 1.00 | 31.23 |
| ATOM | 3790 | CB  | THR | 695 | 44.107 | -3.081 | 14.236 | 1.00 | 30.49 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3791 | OG1 | THR | 695 | 45.133 | -2.079 | 14.134 | 1.00 | 30.14 |
| ATOM | 3792 | CG2 | THR | 695 | 43.329 | -2.888 | 15.512 | 1.00 | 31.07 |
| ATOM | 3793 | C   | THR | 695 | 45.612 | -4.619 | 12.965 | 1.00 | 29.79 |
| ATOM | 3794 | O   | THR | 695 | 45.163 | -4.325 | 11.862 | 1.00 | 31.31 |
| ATOM | 3795 | N   | LEU | 696 | 46.859 | -5.051 | 13.164 | 1.00 | 29.75 |
| ATOM | 3796 | CA  | LEU | 696 | 47.826 | -5.259 | 12.081 | 1.00 | 28.46 |
| ATOM | 3797 | CB  | LEU | 696 | 47.456 | -6.495 | 11.245 | 1.00 | 29.96 |
| ATOM | 3798 | CG  | LEU | 696 | 47.281 | -7.848 | 11.946 | 1.00 | 30.38 |
| ATOM | 3799 | CD1 | LEU | 696 | 47.142 | -8.941 | 10.909 | 1.00 | 30.43 |
| ATOM | 3800 | CD2 | LEU | 696 | 48.468 | -8.138 | 12.800 | 1.00 | 32.35 |
| ATOM | 3801 | C   | LEU | 696 | 48.101 | -4.076 | 11.160 | 1.00 | 28.76 |
| ATOM | 3802 | O   | LEU | 696 | 48.210 | -4.235 | 9.946  | 1.00 | 26.97 |
| ATOM | 3803 | N   | GLY | 697 | 48.314 | -2.900 | 11.745 | 1.00 | 32.70 |
| ATOM | 3804 | CA  | GLY | 697 | 48.609 | -1.705 | 10.960 | 1.00 | 31.69 |
| ATOM | 3805 | C   | GLY | 697 | 47.432 | -0.763 | 10.817 | 1.00 | 32.24 |
| ATOM | 3806 | O   | GLY | 697 | 47.398 | 0.099  | 9.941  | 1.00 | 31.81 |
| ATOM | 3807 | N   | GLY | 698 | 46.455 | -0.922 | 11.700 | 1.00 | 32.63 |
| ATOM | 3808 | CA  | GLY | 698 | 45.277 | -0.081 | 11.643 | 1.00 | 31.93 |
| ATOM | 3809 | C   | GLY | 698 | 45.504 | 1.411  | 11.820 | 1.00 | 28.95 |
| ATOM | 3810 | O   | GLY | 698 | 46.454 | 1.858  | 12.449 | 1.00 | 26.05 |
| ATOM | 3811 | N   | SER | 699 | 44.569 | 2.174  | 11.282 | 1.00 | 30.03 |
| ATOM | 3812 | CA  | SER | 699 | 44.608 | 3.618  | 11.352 | 1.00 | 30.52 |
| ATOM | 3813 | CB  | SER | 699 | 44.095 | 4.219  | 10.046 | 1.00 | 31.24 |
| ATOM | 3814 | OG  | SER | 699 | 44.047 | 5.639  | 10.095 | 1.00 | 33.61 |
| ATOM | 3815 | C   | SER | 699 | 43.695 | 4.024  | 12.492 | 1.00 | 30.45 |
| ATOM | 3816 | O   | SER | 699 | 42.490 | 3.755  | 12.450 | 1.00 | 29.11 |
| ATOM | 3817 | N   | PRO | 700 | 44.259 | 4.591  | 13.573 | 1.00 | 32.27 |
| ATOM | 3818 | CD  | PRO | 700 | 45.693 | 4.761  | 13.881 | 1.00 | 29.61 |
| ATOM | 3819 | CA  | PRO | 700 | 43.408 | 5.007  | 14.695 | 1.00 | 31.34 |
| ATOM | 3820 | CB  | PRO | 700 | 44.428 | 5.358  | 15.777 | 1.00 | 31.30 |
| ATOM | 3821 | CG  | PRO | 700 | 45.662 | 5.745  | 14.989 | 1.00 | 29.66 |
| ATOM | 3822 | C   | PRO | 700 | 42.574 | 6.208  | 14.279 | 1.00 | 29.65 |
| ATOM | 3823 | O   | PRO | 700 | 43.032 | 7.062  | 13.527 | 1.00 | 30.44 |
| ATOM | 3824 | N   | TYR | 701 | 41.306 | 6.190  | 14.660 | 1.00 | 30.37 |
| ATOM | 3825 | CA  | TYR | 701 | 40.359 | 7.272  | 14.367 | 1.00 | 30.01 |
| ATOM | 3826 | CB  | TYR | 701 | 40.655 | 8.474  | 15.269 | 1.00 | 35.19 |
| ATOM | 3827 | CG  | TYR | 701 | 40.452 | 8.215  | 16.749 | 1.00 | 39.32 |
| ATOM | 3828 | CD1 | TYR | 701 | 41.452 | 8.518  | 17.675 | 1.00 | 43.08 |
| ATOM | 3829 | CE1 | TYR | 701 | 41.258 | 8.305  | 19.041 | 1.00 | 46.20 |
| ATOM | 3830 | CD2 | TYR | 701 | 39.256 | 7.688  | 17.229 | 1.00 | 40.66 |
| ATOM | 3831 | CE2 | TYR | 701 | 39.060 | 7.469  | 18.584 | 1.00 | 43.51 |
| ATOM | 3832 | CZ  | TYR | 701 | 40.056 | 7.782  | 19.485 | 1.00 | 45.75 |
| ATOM | 3833 | OH  | TYR | 701 | 39.847 | 7.592  | 20.837 | 1.00 | 50.92 |
| ATOM | 3834 | C   | TYR | 701 | 40.273 | 7.722  | 12.909 | 1.00 | 29.04 |
| ATOM | 3835 | O   | TYR | 701 | 40.393 | 8.904  | 12.611 | 1.00 | 28.53 |
| ATOM | 3836 | N   | PRO | 702 | 40.015 | 6.777  | 11.986 | 1.00 | 28.69 |
| ATOM | 3837 | CD  | PRO | 702 | 39.761 | 5.346  | 12.186 | 1.00 | 26.94 |
| ATOM | 3838 | CA  | PRO | 702 | 39.920 | 7.145  | 10.569 | 1.00 | 27.55 |
| ATOM | 3839 | CB  | PRO | 702 | 39.709 | 5.800  | 9.882  | 1.00 | 27.91 |
| ATOM | 3840 | CG  | PRO | 702 | 39.054 | 4.971  | 10.917 | 1.00 | 29.04 |
| ATOM | 3841 | C   | PRO | 702 | 38.790 | 8.117  | 10.264 | 1.00 | 29.20 |
| ATOM | 3842 | O   | PRO | 702 | 37.631 | 7.880  | 10.617 | 1.00 | 32.39 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3843 | N   | GLY | 703 | 39.148 | 9.213  | 9.591  | 1.00 | 28.34 |
| ATOM | 3844 | CA  | GLY | 703 | 38.191 | 10.236 | 9.226  | 1.00 | 25.97 |
| ATOM | 3845 | C   | GLY | 703 | 37.960 | 11.289 | 10.297 | 1.00 | 28.00 |
| ATOM | 3846 | O   | GLY | 703 | 37.175 | 12.213 | 10.079 | 1.00 | 26.40 |
| ATOM | 3847 | N   | VAL | 704 | 38.621 | 11.139 | 11.448 | 1.00 | 29.54 |
| ATOM | 3848 | CA  | VAL | 704 | 38.480 | 12.061 | 12.576 | 1.00 | 30.61 |
| ATOM | 3849 | CB  | VAL | 704 | 38.606 | 11.324 | 13.944 | 1.00 | 32.54 |
| ATOM | 3850 | CG1 | VAL | 704 | 38.577 | 12.324 | 15.111 | 1.00 | 31.95 |
| ATOM | 3851 | CG2 | VAL | 704 | 37.482 | 10.311 | 14.103 | 1.00 | 34.62 |
| ATOM | 3852 | C   | VAL | 704 | 39.490 | 13.210 | 12.557 | 1.00 | 31.37 |
| ATOM | 3853 | O   | VAL | 704 | 40.683 | 13.001 | 12.757 | 1.00 | 31.73 |
| ATOM | 3854 | N   | PRO | 705 | 39.030 | 14.430 | 12.281 | 1.00 | 32.70 |
| ATOM | 3855 | CD  | PRO | 705 | 37.669 | 14.770 | 11.819 | 1.00 | 33.75 |
| ATOM | 3856 | CA  | PRO | 705 | 39.910 | 15.599 | 12.243 | 1.00 | 31.90 |
| ATOM | 3857 | CB  | PRO | 705 | 39.065 | 16.641 | 11.518 | 1.00 | 32.66 |
| ATOM | 3858 | CG  | PRO | 705 | 37.674 | 16.273 | 11.906 | 1.00 | 35.32 |
| ATOM | 3859 | C   | PRO | 705 | 40.331 | 16.053 | 13.635 | 1.00 | 31.85 |
| ATOM | 3860 | O   | PRO | 705 | 39.709 | 15.686 | 14.634 | 1.00 | 31.50 |
| ATOM | 3861 | N   | VAL | 706 | 41.372 | 16.879 | 13.676 | 1.00 | 32.32 |
| ATOM | 3862 | CA  | VAL | 706 | 41.945 | 17.389 | 14.925 | 1.00 | 36.88 |
| ATOM | 3863 | CB  | VAL | 706 | 42.991 | 18.505 | 14.664 | 1.00 | 39.77 |
| ATOM | 3864 | CG1 | VAL | 706 | 43.657 | 18.907 | 15.974 | 1.00 | 39.17 |
| ATOM | 3865 | CG2 | VAL | 706 | 44.035 | 18.057 | 13.618 | 1.00 | 38.70 |
| ATOM | 3866 | C   | VAL | 706 | 40.938 | 17.923 | 15.953 | 1.00 | 37.80 |
| ATOM | 3867 | O   | VAL | 706 | 40.994 | 17.581 | 17.140 | 1.00 | 37.45 |
| ATOM | 3868 | N   | GLU | 707 | 39.991 | 18.724 | 15.483 | 1.00 | 38.19 |
| ATOM | 3869 | CA  | GLU | 707 | 39.009 | 19.308 | 16.370 | 1.00 | 37.31 |
| ATOM | 3870 | CB  | GLU | 707 | 38.208 | 20.361 | 15.619 | 1.00 | 37.46 |
| ATOM | 3871 | C   | GLU | 707 | 38.084 | 18.264 | 16.994 | 1.00 | 39.56 |
| ATOM | 3872 | O   | GLU | 707 | 37.739 | 18.344 | 18.177 | 1.00 | 41.39 |
| ATOM | 3873 | N   | GLU | 708 | 37.724 | 17.260 | 16.206 | 1.00 | 39.99 |
| ATOM | 3874 | CA  | GLU | 708 | 36.840 | 16.212 | 16.684 | 1.00 | 40.08 |
| ATOM | 3875 | CB  | GLU | 708 | 36.334 | 15.377 | 15.515 | 1.00 | 43.96 |
| ATOM | 3876 | CG  | GLU | 708 | 35.505 | 16.163 | 14.496 | 1.00 | 46.61 |
| ATOM | 3877 | CD  | GLU | 708 | 34.288 | 16.851 | 15.099 | 1.00 | 52.77 |
| ATOM | 3878 | OE1 | GLU | 708 | 33.659 | 16.305 | 16.040 | 1.00 | 52.52 |
| ATOM | 3879 | OE2 | GLU | 708 | 33.954 | 17.955 | 14.604 | 1.00 | 57.04 |
| ATOM | 3880 | C   | GLU | 708 | 37.551 | 15.337 | 17.704 | 1.00 | 39.89 |
| ATOM | 3881 | O   | GLU | 708 | 36.944 | 14.900 | 18.684 | 1.00 | 39.47 |
| ATOM | 3882 | N   | LEU | 709 | 38.838 | 15.086 | 17.471 | 1.00 | 38.99 |
| ATOM | 3883 | CA  | LEU | 709 | 39.638 | 14.277 | 18.393 | 1.00 | 37.51 |
| ATOM | 3884 | CB  | LEU | 709 | 41.079 | 14.120 | 17.892 | 1.00 | 34.15 |
| ATOM | 3885 | CG  | LEU | 709 | 42.061 | 13.338 | 18.787 | 1.00 | 30.94 |
| ATOM | 3886 | CD1 | LEU | 709 | 41.861 | 11.834 | 18.689 | 1.00 | 28.48 |
| ATOM | 3887 | CD2 | LEU | 709 | 43.459 | 13.712 | 18.395 | 1.00 | 29.02 |
| ATOM | 3888 | C   | LEU | 709 | 39.644 | 14.961 | 19.751 | 1.00 | 38.18 |
| ATOM | 3889 | O   | LEU | 709 | 39.460 | 14.313 | 20.787 | 1.00 | 38.08 |
| ATOM | 3890 | N   | PHE | 710 | 39.833 | 16.276 | 19.749 | 1.00 | 39.68 |
| ATOM | 3891 | CA  | PHE | 710 | 39.845 | 17.021 | 21.001 | 1.00 | 43.27 |
| ATOM | 3892 | CB  | PHE | 710 | 40.024 | 18.524 | 20.747 | 1.00 | 43.66 |
| ATOM | 3893 | CG  | PHE | 710 | 41.376 | 18.888 | 20.225 | 1.00 | 46.36 |
| ATOM | 3894 | CD1 | PHE | 710 | 42.459 | 18.024 | 20.403 | 1.00 | 48.33 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3895 | CD2 | PHE | 710 | 41.579 | 20.084 | 19.544 | 1.00 | 47.76 |
| ATOM | 3896 | CE1 | PHE | 710 | 43.723 | 18.343 | 19.915 | 1.00 | 51.79 |
| ATOM | 3897 | CE2 | PHE | 710 | 42.839 | 20.417 | 19.046 | 1.00 | 50.36 |
| ATOM | 3898 | CZ  | PHE | 710 | 43.916 | 19.544 | 19.233 | 1.00 | 53.02 |
| ATOM | 3899 | C   | PHE | 710 | 38.558 | 16.746 | 21.758 | 1.00 | 44.74 |
| ATOM | 3900 | O   | PHE | 710 | 38.587 | 16.422 | 22.952 | 1.00 | 44.99 |
| ATOM | 3901 | N   | LYS | 711 | 37.445 | 16.777 | 21.032 | 1.00 | 45.27 |
| ATOM | 3902 | CA  | LYS | 711 | 36.146 | 16.529 | 21.627 | 1.00 | 44.00 |
| ATOM | 3903 | CB  | LYS | 711 | 35.031 | 16.870 | 20.634 | 1.00 | 46.68 |
| ATOM | 3904 | CG  | LYS | 711 | 33.645 | 16.758 | 21.235 | 1.00 | 52.36 |
| ATOM | 3905 | CD  | LYS | 711 | 32.556 | 17.224 | 20.293 | 1.00 | 54.43 |
| ATOM | 3906 | CE  | LYS | 711 | 31.197 | 16.809 | 20.826 | 1.00 | 55.93 |
| ATOM | 3907 | NZ  | LYS | 711 | 30.101 | 17.220 | 19.912 | 1.00 | 63.51 |
| ATOM | 3908 | C   | LYS | 711 | 36.052 | 15.078 | 22.120 | 1.00 | 42.15 |
| ATOM | 3909 | O   | LYS | 711 | 35.635 | 14.827 | 23.250 | 1.00 | 40.85 |
| ATOM | 3910 | N   | LEU | 712 | 36.467 | 14.125 | 21.294 | 1.00 | 40.98 |
| ATOM | 3911 | CA  | LEU | 712 | 36.432 | 12.719 | 21.691 | 1.00 | 42.26 |
| ATOM | 3912 | CB  | LEU | 712 | 37.012 | 11.814 | 20.597 | 1.00 | 39.67 |
| ATOM | 3913 | CG  | LEU | 712 | 36.159 | 11.449 | 19.381 | 1.00 | 39.06 |
| ATOM | 3914 | CD1 | LEU | 712 | 36.899 | 10.440 | 18.504 | 1.00 | 36.97 |
| ATOM | 3915 | CD2 | LEU | 712 | 34.842 | 10.868 | 19.857 | 1.00 | 36.48 |
| ATOM | 3916 | C   | LEU | 712 | 37.232 | 12.513 | 22.974 | 1.00 | 43.61 |
| ATOM | 3917 | O   | LEU | 712 | 36.796 | 11.785 | 23.875 | 1.00 | 44.10 |
| ATOM | 3918 | N   | LEU | 713 | 38.407 | 13.141 | 23.038 | 1.00 | 43.57 |
| ATOM | 3919 | CA  | LEU | 713 | 39.271 | 13.034 | 24.207 | 1.00 | 43.67 |
| ATOM | 3920 | CB  | LEU | 713 | 40.619 | 13.726 | 23.958 | 1.00 | 42.24 |
| ATOM | 3921 | CG  | LEU | 713 | 41.569 | 13.004 | 22.989 | 1.00 | 38.81 |
| ATOM | 3922 | CD1 | LEU | 713 | 42.856 | 13.796 | 22.817 | 1.00 | 30.86 |
| ATOM | 3923 | CD2 | LEU | 713 | 41.873 | 11.591 | 23.519 | 1.00 | 34.27 |
| ATOM | 3924 | C   | LEU | 713 | 38.589 | 13.594 | 25.450 | 1.00 | 44.78 |
| ATOM | 3925 | O   | LEU | 713 | 38.548 | 12.919 | 26.472 | 1.00 | 46.04 |
| ATOM | 3926 | N   | LYS | 714 | 38.002 | 14.785 | 25.344 | 1.00 | 44.72 |
| ATOM | 3927 | CA  | LYS | 714 | 37.304 | 15.394 | 26.471 | 1.00 | 44.34 |
| ATOM | 3928 | CB  | LYS | 714 | 36.818 | 16.799 | 26.114 | 1.00 | 43.76 |
| ATOM | 3929 | CG  | LYS | 714 | 37.955 | 17.761 | 25.926 | 1.00 | 46.37 |
| ATOM | 3930 | CD  | LYS | 714 | 37.497 | 19.174 | 25.628 | 1.00 | 52.22 |
| ATOM | 3931 | CE  | LYS | 714 | 38.701 | 20.044 | 25.235 | 1.00 | 57.37 |
| ATOM | 3932 | NZ  | LYS | 714 | 39.792 | 20.059 | 26.279 | 1.00 | 58.02 |
| ATOM | 3933 | C   | LYS | 714 | 36.142 | 14.534 | 26.972 | 1.00 | 44.17 |
| ATOM | 3934 | O   | LYS | 714 | 35.861 | 14.499 | 28.167 | 1.00 | 45.14 |
| ATOM | 3935 | N   | GLU | 715 | 35.498 | 13.809 | 26.068 | 1.00 | 43.86 |
| ATOM | 3936 | CA  | GLU | 715 | 34.392 | 12.935 | 26.430 | 1.00 | 42.94 |
| ATOM | 3937 | CB  | GLU | 715 | 33.518 | 12.652 | 25.195 | 1.00 | 46.57 |
| ATOM | 3938 | CG  | GLU | 715 | 32.930 | 13.897 | 24.532 | 1.00 | 51.37 |
| ATOM | 3939 | CD  | GLU | 715 | 32.032 | 13.571 | 23.338 | 1.00 | 54.24 |
| ATOM | 3940 | OE1 | GLU | 715 | 32.215 | 12.503 | 22.704 | 1.00 | 54.19 |
| ATOM | 3941 | OE2 | GLU | 715 | 31.139 | 14.392 | 23.033 | 1.00 | 55.01 |
| ATOM | 3942 | C   | GLU | 715 | 34.878 | 11.607 | 27.036 | 1.00 | 41.36 |
| ATOM | 3943 | O   | GLU | 715 | 34.076 | 10.730 | 27.348 | 1.00 | 38.24 |
| ATOM | 3944 | N   | GLY | 716 | 36.184 | 11.452 | 27.182 | 1.00 | 41.41 |
| ATOM | 3945 | CA  | GLY | 716 | 36.727 | 10.225 | 27.737 | 1.00 | 41.78 |
| ATOM | 3946 | C   | GLY | 716 | 36.602 | 9.034  | 26.799 | 1.00 | 42.65 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 3947 | O   | GLY | 716 | 36.661 | 7.874  | 27.225 | 1.00 | 41.41 |
| ATOM | 3948 | N   | HIS | 717 | 36.439 | 9.321  | 25.513 | 1.00 | 44.56 |
| ATOM | 3949 | CA  | HIS | 717 | 36.286 | 8.291  | 24.502 | 1.00 | 45.91 |
| ATOM | 3950 | CB  | HIS | 717 | 35.935 | 8.926  | 23.153 | 1.00 | 46.65 |
| ATOM | 3951 | CG  | HIS | 717 | 35.860 | 7.946  | 22.024 | 1.00 | 50.03 |
| ATOM | 3952 | CD2 | HIS | 717 | 34.842 | 7.171  | 21.581 | 1.00 | 49.92 |
| ATOM | 3953 | ND1 | HIS | 717 | 36.946 | 7.634  | 21.235 | 1.00 | 51.38 |
| ATOM | 3954 | CE1 | HIS | 717 | 36.604 | 6.708  | 20.360 | 1.00 | 50.10 |
| ATOM | 3955 | NE2 | HIS | 717 | 35.335 | 6.408  | 20.550 | 1.00 | 49.34 |
| ATOM | 3956 | C   | HIS | 717 | 37.535 | 7.434  | 24.354 | 1.00 | 47.68 |
| ATOM | 3957 | O   | HIS | 717 | 38.649 | 7.949  | 24.287 | 1.00 | 49.77 |
| ATOM | 3958 | N   | ARG | 718 | 37.328 | 6.118  | 24.283 | 1.00 | 48.18 |
| ATOM | 3959 | CA  | ARG | 718 | 38.403 | 5.148  | 24.116 | 1.00 | 46.95 |
| ATOM | 3960 | CB  | ARG | 718 | 38.571 | 4.307  | 25.385 | 1.00 | 45.75 |
| ATOM | 3961 | CG  | ARG | 718 | 38.945 | 5.125  | 26.618 | 1.00 | 47.15 |
| ATOM | 3962 | CD  | ARG | 718 | 40.273 | 5.852  | 26.420 | 1.00 | 46.61 |
| ATOM | 3963 | NE  | ARG | 718 | 40.722 | 6.579  | 27.608 | 1.00 | 45.57 |
| ATOM | 3964 | CZ  | ARG | 718 | 40.601 | 7.896  | 27.779 | 1.00 | 45.48 |
| ATOM | 3965 | NH1 | ARG | 718 | 40.033 | 8.644  | 26.845 | 1.00 | 44.14 |
| ATOM | 3966 | NH2 | ARG | 718 | 41.122 | 8.480  | 28.854 | 1.00 | 43.32 |
| ATOM | 3967 | C   | ARG | 718 | 38.109 | 4.250  | 22.912 | 1.00 | 47.56 |
| ATOM | 3968 | O   | ARG | 718 | 36.946 | 3.991  | 22.589 | 1.00 | 48.37 |
| ATOM | 3969 | N   | MET | 719 | 39.149 | 3.873  | 22.181 | 1.00 | 47.33 |
| ATOM | 3970 | CA  | MET | 719 | 38.984 | 3.021  | 21.013 | 1.00 | 47.90 |
| ATOM | 3971 | CB  | MET | 719 | 40.282 | 2.939  | 20.198 | 1.00 | 47.21 |
| ATOM | 3972 | CG  | MET | 719 | 40.652 | 4.245  | 19.509 | 1.00 | 45.79 |
| ATOM | 3973 | SD  | MET | 719 | 42.095 | 4.104  | 18.440 | 1.00 | 42.81 |
| ATOM | 3974 | CE  | MET | 719 | 43.377 | 3.970  | 19.604 | 1.00 | 43.02 |
| ATOM | 3975 | C   | MET | 719 | 38.519 | 1.629  | 21.392 | 1.00 | 49.99 |
| ATOM | 3976 | O   | MET | 719 | 38.889 | 1.102  | 22.450 | 1.00 | 47.98 |
| ATOM | 3977 | N   | ASP | 720 | 37.690 | 1.050  | 20.523 | 1.00 | 53.40 |
| ATOM | 3978 | CA  | ASP | 720 | 37.135 | -0.288 | 20.722 | 1.00 | 53.19 |
| ATOM | 3979 | CB  | ASP | 720 | 36.089 | -0.638 | 19.647 | 1.00 | 56.95 |
| ATOM | 3980 | CG  | ASP | 720 | 34.916 | 0.333  | 19.605 | 1.00 | 61.65 |
| ATOM | 3981 | OD1 | ASP | 720 | 34.908 | 1.331  | 20.356 | 1.00 | 68.60 |
| ATOM | 3982 | OD2 | ASP | 720 | 33.996 | 0.095  | 18.792 | 1.00 | 61.19 |
| ATOM | 3983 | C   | ASP | 720 | 38.208 | -1.372 | 20.713 | 1.00 | 51.12 |
| ATOM | 3984 | O   | ASP | 720 | 39.263 | -1.229 | 20.081 | 1.00 | 50.71 |
| ATOM | 3985 | N   | LYS | 721 | 37.926 | -2.453 | 21.432 | 1.00 | 48.85 |
| ATOM | 3986 | CA  | LYS | 721 | 38.833 | -3.576 | 21.509 | 1.00 | 47.92 |
| ATOM | 3987 | CB  | LYS | 721 | 38.335 | -4.560 | 22.562 | 1.00 | 47.79 |
| ATOM | 3988 | CG  | LYS | 721 | 39.024 | -5.901 | 22.521 | 1.00 | 51.08 |
| ATOM | 3989 | CD  | LYS | 721 | 38.493 | -6.810 | 23.597 | 1.00 | 53.21 |
| ATOM | 3990 | CE  | LYS | 721 | 38.484 | -8.255 | 23.141 | 1.00 | 54.60 |
| ATOM | 3991 | NZ  | LYS | 721 | 38.158 | -9.176 | 24.268 | 1.00 | 61.37 |
| ATOM | 3992 | C   | LYS | 721 | 38.861 | -4.261 | 20.155 | 1.00 | 49.01 |
| ATOM | 3993 | O   | LYS | 721 | 37.822 | -4.688 | 19.653 | 1.00 | 52.79 |
| ATOM | 3994 | N   | PRO | 722 | 40.053 | -4.366 | 19.541 | 1.00 | 48.92 |
| ATOM | 3995 | CD  | PRO | 722 | 41.356 | -3.839 | 19.972 | 1.00 | 51.11 |
| ATOM | 3996 | CA  | PRO | 722 | 40.167 | -5.011 | 18.233 | 1.00 | 46.01 |
| ATOM | 3997 | CB  | PRO | 722 | 41.663 | -4.904 | 17.918 | 1.00 | 45.64 |
| ATOM | 3998 | CG  | PRO | 722 | 42.090 | -3.690 | 18.646 | 1.00 | 47.86 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 3999 | C   | PRO | 722 | 39.745 | -6.466  | 18.303 | 1.00 | 43.57 |
| ATOM | 4000 | O   | PRO | 722 | 39.719 | -7.069  | 19.381 | 1.00 | 41.72 |
| ATOM | 4001 | N   | SER | 723 | 39.360 | -7.001  | 17.150 | 1.00 | 43.14 |
| ATOM | 4002 | CA  | SER | 723 | 38.991 | -8.398  | 17.044 | 1.00 | 41.85 |
| ATOM | 4003 | CB  | SER | 723 | 38.260 | -8.660  | 15.734 | 1.00 | 37.27 |
| ATOM | 4004 | OG  | SER | 723 | 39.112 | -8.421  | 14.639 | 1.00 | 39.44 |
| ATOM | 4005 | C   | SER | 723 | 40.339 | -9.110  | 17.049 | 1.00 | 41.68 |
| ATOM | 4006 | O   | SER | 723 | 41.299 | -8.605  | 16.493 | 1.00 | 40.84 |
| ATOM | 4007 | N   | ASN | 724 | 40.405 | -10.275 | 17.683 | 1.00 | 45.99 |
| ATOM | 4008 | CA  | ASN | 724 | 41.651 | -11.034 | 17.800 | 1.00 | 49.22 |
| ATOM | 4009 | CB  | ASN | 724 | 42.342 | -11.215 | 16.453 | 1.00 | 52.35 |
| ATOM | 4010 | CG  | ASN | 724 | 41.768 | -12.357 | 15.668 | 1.00 | 58.07 |
| ATOM | 4011 | OD1 | ASN | 724 | 41.821 | -13.506 | 16.103 | 1.00 | 62.42 |
| ATOM | 4012 | ND2 | ASN | 724 | 41.186 | -12.054 | 14.513 | 1.00 | 62.13 |
| ATOM | 4013 | C   | ASN | 724 | 42.558 | -10.323 | 18.787 | 1.00 | 49.77 |
| ATOM | 4014 | O   | ASN | 724 | 43.698 | -9.982  | 18.494 | 1.00 | 51.48 |
| ATOM | 4015 | N   | CYS | 725 | 41.995 | -10.054 | 19.954 | 1.00 | 50.34 |
| ATOM | 4016 | CA  | CYS | 725 | 42.698 | -9.398  | 21.028 | 1.00 | 49.83 |
| ATOM | 4017 | CB  | CYS | 725 | 42.623 | -7.878  | 20.868 | 1.00 | 47.11 |
| ATOM | 4018 | SG  | CYS | 725 | 43.485 | -6.992  | 22.169 | 1.00 | 38.55 |
| ATOM | 4019 | C   | CYS | 725 | 42.001 | -9.861  | 22.299 | 1.00 | 50.11 |
| ATOM | 4020 | O   | CYS | 725 | 40.772 | -9.852  | 22.383 | 1.00 | 50.63 |
| ATOM | 4021 | N   | THR | 726 | 42.788 | -10.350 | 23.244 | 1.00 | 50.37 |
| ATOM | 4022 | CA  | THR | 726 | 42.261 | -10.843 | 24.497 | 1.00 | 51.05 |
| ATOM | 4023 | CB  | THR | 726 | 43.341 | -11.663 | 25.234 | 1.00 | 53.50 |
| ATOM | 4024 | OG1 | THR | 726 | 44.292 | -10.780 | 25.829 | 1.00 | 57.56 |
| ATOM | 4025 | CG2 | THR | 726 | 44.074 | -12.554 | 24.241 | 1.00 | 52.55 |
| ATOM | 4026 | C   | THR | 726 | 41.843 | -9.665  | 25.354 | 1.00 | 52.18 |
| ATOM | 4027 | O   | THR | 726 | 42.403 | -8.574  | 25.219 | 1.00 | 55.14 |
| ATOM | 4028 | N   | ASN | 727 | 40.868 | -9.860  | 26.237 | 1.00 | 52.55 |
| ATOM | 4029 | CA  | ASN | 727 | 40.401 | -8.781  | 27.114 | 1.00 | 53.17 |
| ATOM | 4030 | CB  | ASN | 727 | 39.246 | -9.265  | 27.992 | 1.00 | 60.65 |
| ATOM | 4031 | CG  | ASN | 727 | 39.584 | -10.545 | 28.751 | 1.00 | 68.99 |
| ATOM | 4032 | OD1 | ASN | 727 | 40.704 | -10.718 | 29.243 | 1.00 | 73.66 |
| ATOM | 4033 | ND2 | ASN | 727 | 38.629 | -11.454 | 28.825 | 1.00 | 74.66 |
| ATOM | 4034 | C   | ASN | 727 | 41.537 | -8.254  | 27.976 | 1.00 | 50.79 |
| ATOM | 4035 | O   | ASN | 727 | 41.513 | -7.107  | 28.414 | 1.00 | 48.17 |
| ATOM | 4036 | N   | GLU | 728 | 42.527 | -9.111  | 28.215 | 1.00 | 50.18 |
| ATOM | 4037 | CA  | GLU | 728 | 43.693 | -8.764  | 29.020 | 1.00 | 49.68 |
| ATOM | 4038 | CB  | GLU | 728 | 44.544 | -10.011 | 29.289 | 1.00 | 50.61 |
| ATOM | 4039 | CG  | GLU | 728 | 45.801 | -9.758  | 30.120 | 1.00 | 55.44 |
| ATOM | 4040 | CD  | GLU | 728 | 46.509 | -11.045 | 30.542 | 1.00 | 56.45 |
| ATOM | 4041 | OE1 | GLU | 728 | 46.737 | -11.930 | 29.685 | 1.00 | 53.73 |
| ATOM | 4042 | OE2 | GLU | 728 | 46.865 | -11.161 | 31.733 | 1.00 | 57.38 |
| ATOM | 4043 | C   | GLU | 728 | 44.509 | -7.713  | 28.272 | 1.00 | 46.92 |
| ATOM | 4044 | O   | GLU | 728 | 44.760 | -6.614  | 28.785 | 1.00 | 46.08 |
| ATOM | 4045 | N   | LEU | 729 | 44.869 | -8.039  | 27.033 | 1.00 | 42.69 |
| ATOM | 4046 | CA  | LEU | 729 | 45.641 | -7.137  | 26.192 | 1.00 | 40.42 |
| ATOM | 4047 | CB  | LEU | 729 | 45.950 | -7.796  | 24.846 | 1.00 | 34.84 |
| ATOM | 4048 | CG  | LEU | 729 | 47.004 | -8.900  | 24.952 | 1.00 | 34.35 |
| ATOM | 4049 | CD1 | LEU | 729 | 46.960 | -9.780  | 23.749 | 1.00 | 31.03 |
| ATOM | 4050 | CD2 | LEU | 729 | 48.404 | -8.320  | 25.139 | 1.00 | 33.63 |



|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4051 | C   | LEU | 729 | 44.909 | -5.817 | 25.985 | 1.00 | 40.58 |
| ATOM | 4052 | O   | LEU | 729 | 45.524 | -4.760 | 25.929 | 1.00 | 40.10 |
| ATOM | 4053 | N   | TYR | 730 | 43.591 | -5.886 | 25.917 | 1.00 | 39.32 |
| ATOM | 4054 | CA  | TYR | 730 | 42.807 | -4.694 | 25.720 | 1.00 | 41.49 |
| ATOM | 4055 | CB  | TYR | 730 | 41.384 | -5.052 | 25.302 | 1.00 | 39.70 |
| ATOM | 4056 | CG  | TYR | 730 | 40.507 | -3.846 | 25.099 | 1.00 | 39.53 |
| ATOM | 4057 | CD1 | TYR | 730 | 40.828 | -2.879 | 24.142 | 1.00 | 35.10 |
| ATOM | 4058 | CE1 | TYR | 730 | 40.019 | -1.758 | 23.958 | 1.00 | 36.33 |
| ATOM | 4059 | CD2 | TYR | 730 | 39.352 | -3.661 | 25.874 | 1.00 | 38.44 |
| ATOM | 4060 | CE2 | TYR | 730 | 38.537 | -2.541 | 25.696 | 1.00 | 37.68 |
| ATOM | 4061 | CZ  | TYR | 730 | 38.876 | -1.601 | 24.730 | 1.00 | 36.85 |
| ATOM | 4062 | OH  | TYR | 730 | 38.041 | -0.541 | 24.489 | 1.00 | 40.58 |
| ATOM | 4063 | C   | TYR | 730 | 42.814 | -3.849 | 26.993 | 1.00 | 43.50 |
| ATOM | 4064 | O   | TYR | 730 | 42.880 | -2.621 | 26.931 | 1.00 | 44.45 |
| ATOM | 4065 | N   | MET | 731 | 42.753 | -4.492 | 28.151 | 1.00 | 46.53 |
| ATOM | 4066 | CA  | MET | 731 | 42.782 | -3.744 | 29.406 | 1.00 | 48.67 |
| ATOM | 4067 | CB  | MET | 731 | 42.488 | -4.668 | 30.590 | 1.00 | 54.90 |
| ATOM | 4068 | CG  | MET | 731 | 41.072 | -5.229 | 30.577 | 1.00 | 63.75 |
| ATOM | 4069 | SD  | MET | 731 | 39.766 | -3.998 | 30.763 | 1.00 | 69.82 |
| ATOM | 4070 | CE  | MET | 731 | 39.849 | -3.788 | 32.581 | 1.00 | 68.20 |
| ATOM | 4071 | C   | MET | 731 | 44.148 | -3.087 | 29.551 | 1.00 | 45.73 |
| ATOM | 4072 | O   | MET | 731 | 44.273 | -2.024 | 30.160 | 1.00 | 42.09 |
| ATOM | 4073 | N   | MET | 732 | 45.168 | -3.728 | 28.986 | 1.00 | 43.47 |
| ATOM | 4074 | CA  | MET | 732 | 46.519 | -3.189 | 29.024 | 1.00 | 43.85 |
| ATOM | 4075 | CB  | MET | 732 | 47.515 | -4.154 | 28.365 | 1.00 | 40.67 |
| ATOM | 4076 | CG  | MET | 732 | 48.966 | -3.646 | 28.369 | 1.00 | 39.96 |
| ATOM | 4077 | SD  | MET | 732 | 50.252 | -4.870 | 27.887 | 1.00 | 35.34 |
| ATOM | 4078 | CE  | MET | 732 | 50.523 | -5.667 | 29.390 | 1.00 | 35.15 |
| ATOM | 4079 | C   | MET | 732 | 46.460 | -1.860 | 28.275 | 1.00 | 43.91 |
| ATOM | 4080 | O   | MET | 732 | 46.924 | -0.835 | 28.782 | 1.00 | 47.29 |
| ATOM | 4081 | N   | MET | 733 | 45.798 | -1.860 | 27.120 | 1.00 | 42.51 |
| ATOM | 4082 | CA  | MET | 733 | 45.639 | -0.652 | 26.319 | 1.00 | 39.85 |
| ATOM | 4083 | CB  | MET | 733 | 44.888 | -0.932 | 25.013 | 1.00 | 38.08 |
| ATOM | 4084 | CG  | MET | 733 | 45.614 | -1.805 | 23.991 | 1.00 | 37.14 |
| ATOM | 4085 | SD  | MET | 733 | 44.509 | -2.170 | 22.578 | 1.00 | 37.32 |
| ATOM | 4086 | CE  | MET | 733 | 45.198 | -3.684 | 21.929 | 1.00 | 28.98 |
| ATOM | 4087 | C   | MET | 733 | 44.838 | 0.363  | 27.123 | 1.00 | 41.12 |
| ATOM | 4088 | O   | MET | 733 | 45.228 | 1.532  | 27.213 | 1.00 | 44.38 |
| ATOM | 4089 | N   | ARG | 734 | 43.737 | -0.084 | 27.731 | 1.00 | 40.28 |
| ATOM | 4090 | CA  | ARG | 734 | 42.893 | 0.813  | 28.516 | 1.00 | 40.23 |
| ATOM | 4091 | CB  | ARG | 734 | 41.632 | 0.095  | 29.007 | 1.00 | 39.95 |
| ATOM | 4092 | CG  | ARG | 734 | 40.723 | -0.384 | 27.894 | 1.00 | 36.41 |
| ATOM | 4093 | CD  | ARG | 734 | 40.323 | 0.741  | 26.995 | 1.00 | 39.31 |
| ATOM | 4094 | NE  | ARG | 734 | 39.510 | 1.733  | 27.682 | 1.00 | 48.97 |
| ATOM | 4095 | CZ  | ARG | 734 | 38.182 | 1.681  | 27.774 | 1.00 | 53.99 |
| ATOM | 4096 | NH1 | ARG | 734 | 37.503 | 0.681  | 27.222 | 1.00 | 56.64 |
| ATOM | 4097 | NH2 | ARG | 734 | 37.526 | 2.633  | 28.416 | 1.00 | 56.79 |
| ATOM | 4098 | C   | ARG | 734 | 43.694 | 1.387  | 29.675 | 1.00 | 39.38 |
| ATOM | 4099 | O   | ARG | 734 | 43.538 | 2.564  | 30.010 | 1.00 | 41.82 |
| ATOM | 4100 | N   | ASP | 735 | 44.583 | 0.572  | 30.244 | 1.00 | 37.67 |
| ATOM | 4101 | CA  | ASP | 735 | 45.465 | 1.000  | 31.339 | 1.00 | 39.58 |
| ATOM | 4102 | CB  | ASP | 735 | 46.392 | -0.137 | 31.773 | 1.00 | 42.90 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4103 | CG  | ASP | 735 | 45.690 | -1.175 | 32.604 | 1.00 | 47.78 |
| ATOM | 4104 | OD1 | ASP | 735 | 46.116 | -2.355 | 32.524 | 1.00 | 47.92 |
| ATOM | 4105 | OD2 | ASP | 735 | 44.733 | -0.803 | 33.339 | 1.00 | 46.75 |
| ATOM | 4106 | C   | ASP | 735 | 46.339 | 2.161  | 30.881 | 1.00 | 37.68 |
| ATOM | 4107 | O   | ASP | 735 | 46.447 | 3.178  | 31.579 | 1.00 | 36.83 |
| ATOM | 4108 | N   | CYS | 736 | 46.996 | 1.967  | 29.734 | 1.00 | 35.06 |
| ATOM | 4109 | CA  | CYS | 736 | 47.858 | 2.979  | 29.140 | 1.00 | 32.91 |
| ATOM | 4110 | CB  | CYS | 736 | 48.499 | 2.469  | 27.848 | 1.00 | 27.65 |
| ATOM | 4111 | SG  | CYS | 736 | 49.631 | 1.067  | 27.989 | 1.00 | 31.08 |
| ATOM | 4112 | C   | CYS | 736 | 47.054 | 4.232  | 28.828 | 1.00 | 35.28 |
| ATOM | 4113 | O   | CYS | 736 | 47.595 | 5.334  | 28.810 | 1.00 | 35.52 |
| ATOM | 4114 | N   | TRP | 737 | 45.742 | 4.078  | 28.677 | 1.00 | 38.73 |
| ATOM | 4115 | CA  | TRP | 737 | 44.885 | 5.217  | 28.352 | 1.00 | 41.10 |
| ATOM | 4116 | CB  | TRP | 737 | 43.890 | 4.816  | 27.266 | 1.00 | 41.22 |
| ATOM | 4117 | CG  | TRP | 737 | 44.535 | 4.362  | 25.994 | 1.00 | 40.65 |
| ATOM | 4118 | CD2 | TRP | 737 | 43.976 | 3.465  | 25.026 | 1.00 | 41.90 |
| ATOM | 4119 | CE2 | TRP | 737 | 44.932 | 3.325  | 23.990 | 1.00 | 41.02 |
| ATOM | 4120 | CE3 | TRP | 737 | 42.763 | 2.764  | 24.930 | 1.00 | 40.44 |
| ATOM | 4121 | CD1 | TRP | 737 | 45.766 | 4.721  | 25.517 | 1.00 | 39.14 |
| ATOM | 4122 | NE1 | TRP | 737 | 46.011 | 4.103  | 24.316 | 1.00 | 37.93 |
| ATOM | 4123 | CZ2 | TRP | 737 | 44.708 | 2.512  | 22.875 | 1.00 | 40.92 |
| ATOM | 4124 | CZ3 | TRP | 737 | 42.549 | 1.956  | 23.820 | 1.00 | 38.42 |
| ATOM | 4125 | CH2 | TRP | 737 | 43.518 | 1.837  | 22.812 | 1.00 | 36.49 |
| ATOM | 4126 | C   | TRP | 737 | 44.159 | 5.847  | 29.538 | 1.00 | 41.39 |
| ATOM | 4127 | O   | TRP | 737 | 43.163 | 6.551  | 29.366 | 1.00 | 40.86 |
| ATOM | 4128 | N   | HIS | 738 | 44.685 | 5.643  | 30.743 | 1.00 | 43.61 |
| ATOM | 4129 | CA  | HIS | 738 | 44.059 | 6.197  | 31.941 | 1.00 | 44.35 |
| ATOM | 4130 | CB  | HIS | 738 | 44.698 | 5.596  | 33.183 | 1.00 | 45.31 |
| ATOM | 4131 | CG  | HIS | 738 | 43.970 | 5.922  | 34.446 | 1.00 | 50.87 |
| ATOM | 4132 | CD2 | HIS | 738 | 43.685 | 7.111  | 35.026 | 1.00 | 49.13 |
| ATOM | 4133 | ND1 | HIS | 738 | 43.401 | 4.961  | 35.252 | 1.00 | 52.48 |
| ATOM | 4134 | CE1 | HIS | 738 | 42.798 | 5.541  | 36.275 | 1.00 | 55.70 |
| ATOM | 4135 | NE2 | HIS | 738 | 42.955 | 6.848  | 36.159 | 1.00 | 51.42 |
| ATOM | 4136 | C   | HIS | 738 | 44.202 | 7.714  | 31.969 | 1.00 | 44.15 |
| ATOM | 4137 | O   | HIS | 738 | 45.294 | 8.223  | 31.787 | 1.00 | 43.14 |
| ATOM | 4138 | N   | ALA | 739 | 43.115 | 8.428  | 32.272 | 1.00 | 45.42 |
| ATOM | 4139 | CA  | ALA | 739 | 43.141 | 9.895  | 32.318 | 1.00 | 47.29 |
| ATOM | 4140 | CB  | ALA | 739 | 41.792 | 10.426 | 32.752 | 1.00 | 49.75 |
| ATOM | 4141 | C   | ALA | 739 | 44.240 | 10.454 | 33.223 | 1.00 | 48.73 |
| ATOM | 4142 | O   | ALA | 739 | 44.921 | 11.415 | 32.868 | 1.00 | 49.32 |
| ATOM | 4143 | N   | VAL | 740 | 44.331 | 9.893  | 34.425 | 1.00 | 50.51 |
| ATOM | 4144 | CA  | VAL | 740 | 45.332 | 10.262 | 35.424 | 1.00 | 51.32 |
| ATOM | 4145 | CB  | VAL | 740 | 44.861 | 9.880  | 36.842 | 1.00 | 52.29 |
| ATOM | 4146 | CG1 | VAL | 740 | 45.905 | 10.254 | 37.869 | 1.00 | 53.73 |
| ATOM | 4147 | CG2 | VAL | 740 | 43.551 | 10.575 | 37.152 | 1.00 | 53.54 |
| ATOM | 4148 | C   | VAL | 740 | 46.656 | 9.535  | 35.121 | 1.00 | 51.06 |
| ATOM | 4149 | O   | VAL | 740 | 46.780 | 8.320  | 35.348 | 1.00 | 50.81 |
| ATOM | 4150 | N   | PRO | 741 | 47.670 | 10.280 | 34.657 | 1.00 | 50.12 |
| ATOM | 4151 | CD  | PRO | 741 | 47.595 | 11.738 | 34.454 | 1.00 | 50.19 |
| ATOM | 4152 | CA  | PRO | 741 | 49.003 | 9.775  | 34.294 | 1.00 | 51.10 |
| ATOM | 4153 | CB  | PRO | 741 | 49.790 | 11.060 | 34.024 | 1.00 | 50.35 |
| ATOM | 4154 | CG  | PRO | 741 | 48.731 | 11.978 | 33.492 | 1.00 | 50.13 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4155 | C   | PRO | 741 | 49.687 | 8.902  | 35.340 | 1.00 | 52.02 |
| ATOM | 4156 | O   | PRO | 741 | 50.374 | 7.941  | 34.998 | 1.00 | 50.79 |
| ATOM | 4157 | N   | SER | 742 | 49.482 | 9.228  | 36.613 | 1.00 | 53.75 |
| ATOM | 4158 | CA  | SER | 742 | 50.079 | 8.474  | 37.708 | 1.00 | 54.58 |
| ATOM | 4159 | CB  | SER | 742 | 49.921 | 9.245  | 39.020 | 1.00 | 57.25 |
| ATOM | 4160 | OG  | SER | 742 | 48.572 | 9.629  | 39.237 | 1.00 | 61.69 |
| ATOM | 4161 | C   | SER | 742 | 49.479 | 7.077  | 37.851 | 1.00 | 53.33 |
| ATOM | 4162 | O   | SER | 742 | 50.074 | 6.189  | 38.464 | 1.00 | 52.98 |
| ATOM | 4163 | N   | GLN | 743 | 48.286 | 6.897  | 37.305 | 1.00 | 52.97 |
| ATOM | 4164 | CA  | GLN | 743 | 47.616 | 5.613  | 37.390 | 1.00 | 52.15 |
| ATOM | 4165 | CB  | GLN | 743 | 46.108 | 5.827  | 37.505 | 1.00 | 56.12 |
| ATOM | 4166 | CG  | GLN | 743 | 45.506 | 5.374  | 38.838 | 1.00 | 60.50 |
| ATOM | 4167 | CD  | GLN | 743 | 46.269 | 5.887  | 40.046 | 1.00 | 64.45 |
| ATOM | 4168 | OE1 | GLN | 743 | 46.910 | 5.114  | 40.752 | 1.00 | 65.64 |
| ATOM | 4169 | NE2 | GLN | 743 | 46.199 | 7.194  | 40.290 | 1.00 | 67.99 |
| ATOM | 4170 | C   | GLN | 743 | 47.963 | 4.690  | 36.229 | 1.00 | 49.54 |
| ATOM | 4171 | O   | GLN | 743 | 47.629 | 3.499  | 36.246 | 1.00 | 50.07 |
| ATOM | 4172 | N   | ARG | 744 | 48.605 | 5.241  | 35.202 | 1.00 | 46.93 |
| ATOM | 4173 | CA  | ARG | 744 | 49.010 | 4.437  | 34.044 | 1.00 | 44.51 |
| ATOM | 4174 | CB  | ARG | 744 | 49.478 | 5.330  | 32.894 | 1.00 | 39.30 |
| ATOM | 4175 | CG  | ARG | 744 | 48.433 | 6.300  | 32.360 | 1.00 | 32.53 |
| ATOM | 4176 | CD  | ARG | 744 | 48.991 | 7.178  | 31.254 | 1.00 | 25.50 |
| ATOM | 4177 | NE  | ARG | 744 | 48.034 | 8.218  | 30.932 | 1.00 | 32.16 |
| ATOM | 4178 | CZ  | ARG | 744 | 48.352 | 9.454  | 30.542 | 1.00 | 34.35 |
| ATOM | 4179 | NH1 | ARG | 744 | 49.622 | 9.814  | 30.400 | 1.00 | 30.49 |
| ATOM | 4180 | NH2 | ARG | 744 | 47.382 | 10.349 | 30.350 | 1.00 | 32.23 |
| ATOM | 4181 | C   | ARG | 744 | 50.153 | 3.498  | 34.472 | 1.00 | 44.61 |
| ATOM | 4182 | O   | ARG | 744 | 50.833 | 3.741  | 35.474 | 1.00 | 47.68 |
| ATOM | 4183 | N   | PRO | 745 | 50.319 | 2.365  | 33.765 | 1.00 | 43.21 |
| ATOM | 4184 | CD  | PRO | 745 | 49.444 | 1.737  | 32.763 | 1.00 | 42.00 |
| ATOM | 4185 | CA  | PRO | 745 | 51.414 | 1.470  | 34.157 | 1.00 | 40.11 |
| ATOM | 4186 | CB  | PRO | 745 | 51.004 | 0.132  | 33.532 | 1.00 | 37.54 |
| ATOM | 4187 | CG  | PRO | 745 | 50.251 | 0.515  | 32.335 | 1.00 | 36.49 |
| ATOM | 4188 | C   | PRO | 745 | 52.744 | 1.956  | 33.612 | 1.00 | 39.15 |
| ATOM | 4189 | O   | PRO | 745 | 52.807 | 2.654  | 32.602 | 1.00 | 40.56 |
| ATOM | 4190 | N   | THR | 746 | 53.812 | 1.626  | 34.316 | 1.00 | 37.77 |
| ATOM | 4191 | CA  | THR | 746 | 55.135 | 2.020  | 33.886 | 1.00 | 37.61 |
| ATOM | 4192 | CB  | THR | 746 | 56.113 | 2.132  | 35.091 | 1.00 | 39.14 |
| ATOM | 4193 | OG1 | THR | 746 | 56.439 | 0.824  | 35.600 | 1.00 | 35.16 |
| ATOM | 4194 | CG2 | THR | 746 | 55.489 | 2.990  | 36.195 | 1.00 | 36.82 |
| ATOM | 4195 | C   | THR | 746 | 55.687 | 1.036  | 32.852 | 1.00 | 36.75 |
| ATOM | 4196 | O   | THR | 746 | 55.228 | -0.103 | 32.772 | 1.00 | 32.89 |
| ATOM | 4197 | N   | PHE | 747 | 56.649 | 1.482  | 32.043 | 1.00 | 36.56 |
| ATOM | 4198 | CA  | PHE | 747 | 57.267 | 0.599  | 31.055 | 1.00 | 33.79 |
| ATOM | 4199 | CB  | PHE | 747 | 58.305 | 1.350  | 30.226 | 1.00 | 28.85 |
| ATOM | 4200 | CG  | PHE | 747 | 57.702 | 2.123  | 29.103 | 1.00 | 30.71 |
| ATOM | 4201 | CD1 | PHE | 747 | 57.060 | 1.455  | 28.059 | 1.00 | 26.42 |
| ATOM | 4202 | CD2 | PHE | 747 | 57.749 | 3.510  | 29.080 | 1.00 | 28.73 |
| ATOM | 4203 | CE1 | PHE | 747 | 56.469 | 2.154  | 27.025 | 1.00 | 26.56 |
| ATOM | 4204 | CE2 | PHE | 747 | 57.150 | 4.216  | 28.047 | 1.00 | 28.97 |
| ATOM | 4205 | CZ  | PHE | 747 | 56.518 | 3.535  | 27.018 | 1.00 | 28.95 |
| ATOM | 4206 | C   | PHE | 747 | 57.901 | -0.593 | 31.732 | 1.00 | 34.64 |

|      |      |     |     |     |        |        |        |      |       |
|------|------|-----|-----|-----|--------|--------|--------|------|-------|
| ATOM | 4207 | O   | PHE | 747 | 58.008 | -1.667 | 31.156 | 1.00 | 31.47 |
| ATOM | 4208 | N   | LYS | 748 | 58.328 | -0.399 | 32.972 | 1.00 | 38.86 |
| ATOM | 4209 | CA  | LYS | 748 | 58.920 | -1.480 | 33.727 | 1.00 | 39.79 |
| ATOM | 4210 | CB  | LYS | 748 | 59.529 | -0.952 | 35.026 | 1.00 | 43.68 |
| ATOM | 4211 | CG  | LYS | 748 | 60.200 | -2.047 | 35.838 | 1.00 | 48.11 |
| ATOM | 4212 | CD  | LYS | 748 | 60.917 | -1.515 | 37.064 | 1.00 | 51.33 |
| ATOM | 4213 | CE  | LYS | 748 | 61.353 | -2.660 | 37.973 | 1.00 | 51.17 |
| ATOM | 4214 | NZ  | LYS | 748 | 62.135 | -2.141 | 39.127 | 1.00 | 56.55 |
| ATOM | 4215 | C   | LYS | 748 | 57.813 | -2.503 | 34.008 | 1.00 | 41.14 |
| ATOM | 4216 | O   | LYS | 748 | 58.025 | -3.706 | 33.848 | 1.00 | 38.24 |
| ATOM | 4217 | N   | GLN | 749 | 56.622 | -2.008 | 34.383 | 1.00 | 41.20 |
| ATOM | 4218 | CA  | GLN | 749 | 55.454 | -2.856 | 34.669 | 1.00 | 40.49 |
| ATOM | 4219 | CB  | GLN | 749 | 54.254 | -2.015 | 35.134 | 1.00 | 45.70 |
| ATOM | 4220 | CG  | GLN | 749 | 54.378 | -1.368 | 36.500 | 1.00 | 50.61 |
| ATOM | 4221 | CD  | GLN | 749 | 53.203 | -0.441 | 36.797 | 1.00 | 55.26 |
| ATOM | 4222 | OE1 | GLN | 749 | 53.392 | 0.727  | 37.123 | 1.00 | 58.00 |
| ATOM | 4223 | NE2 | GLN | 749 | 51.988 | -0.951 | 36.665 | 1.00 | 59.25 |
| ATOM | 4224 | C   | GLN | 749 | 55.049 | -3.588 | 33.397 | 1.00 | 37.42 |
| ATOM | 4225 | O   | GLN | 749 | 54.964 | -4.810 | 33.369 | 1.00 | 36.00 |
| ATOM | 4226 | N   | LEU | 750 | 54.810 | -2.817 | 32.340 | 1.00 | 36.76 |
| ATOM | 4227 | CA  | LEU | 750 | 54.409 | -3.355 | 31.033 | 1.00 | 35.39 |
| ATOM | 4228 | CB  | LEU | 750 | 54.358 | -2.241 | 29.984 | 1.00 | 30.97 |
| ATOM | 4229 | CG  | LEU | 750 | 53.369 | -1.091 | 30.177 | 1.00 | 27.36 |
| ATOM | 4230 | CD1 | LEU | 750 | 53.745 | 0.037  | 29.217 | 1.00 | 29.15 |
| ATOM | 4231 | CD2 | LEU | 750 | 51.941 | -1.578 | 29.934 | 1.00 | 29.22 |
| ATOM | 4232 | C   | LEU | 750 | 55.369 | -4.437 | 30.557 | 1.00 | 35.16 |
| ATOM | 4233 | O   | LEU | 750 | 54.934 | -5.449 | 30.014 | 1.00 | 34.45 |
| ATOM | 4234 | N   | VAL | 751 | 56.673 | -4.212 | 30.721 | 1.00 | 38.76 |
| ATOM | 4235 | CA  | VAL | 751 | 57.656 | -5.217 | 30.312 | 1.00 | 38.69 |
| ATOM | 4236 | CB  | VAL | 751 | 59.129 | -4.724 | 30.485 | 1.00 | 33.81 |
| ATOM | 4237 | CG1 | VAL | 751 | 60.092 | -5.836 | 30.120 | 1.00 | 32.04 |
| ATOM | 4238 | CG2 | VAL | 751 | 59.415 | -3.535 | 29.598 | 1.00 | 30.67 |
| ATOM | 4239 | C   | VAL | 751 | 57.428 | -6.493 | 31.131 | 1.00 | 41.68 |
| ATOM | 4240 | O   | VAL | 751 | 57.492 | -7.599 | 30.594 | 1.00 | 39.92 |
| ATOM | 4241 | N   | GLU | 752 | 57.109 | -6.338 | 32.414 | 1.00 | 44.22 |
| ATOM | 4242 | CA  | GLU | 752 | 56.854 | -7.501 | 33.266 | 1.00 | 47.43 |
| ATOM | 4243 | CB  | GLU | 752 | 56.779 | -7.078 | 34.743 | 1.00 | 49.29 |
| ATOM | 4244 | CG  | GLU | 752 | 58.093 | -6.448 | 35.212 | 1.00 | 53.53 |
| ATOM | 4245 | CD  | GLU | 752 | 58.215 | -6.249 | 36.707 | 1.00 | 53.05 |
| ATOM | 4246 | OE1 | GLU | 752 | 58.554 | -5.123 | 37.136 | 1.00 | 53.63 |
| ATOM | 4247 | OE2 | GLU | 752 | 58.021 | -7.228 | 37.452 | 1.00 | 56.18 |
| ATOM | 4248 | C   | GLU | 752 | 55.594 | -8.256 | 32.809 | 1.00 | 46.90 |
| ATOM | 4249 | O   | GLU | 752 | 55.646 | -9.464 | 32.551 | 1.00 | 43.85 |
| ATOM | 4250 | N   | ASP | 753 | 54.490 | -7.529 | 32.640 | 1.00 | 48.05 |
| ATOM | 4251 | CA  | ASP | 753 | 53.232 | -8.128 | 32.193 | 1.00 | 48.46 |
| ATOM | 4252 | CB  | ASP | 753 | 52.119 | -7.090 | 32.118 | 1.00 | 51.25 |
| ATOM | 4253 | CG  | ASP | 753 | 51.579 | -6.707 | 33.467 | 1.00 | 54.20 |
| ATOM | 4254 | OD1 | ASP | 753 | 51.440 | -7.589 | 34.330 | 1.00 | 57.31 |
| ATOM | 4255 | OD2 | ASP | 753 | 51.281 | -5.513 | 33.659 | 1.00 | 55.58 |
| ATOM | 4256 | C   | ASP | 753 | 53.371 | -8.771 | 30.837 | 1.00 | 48.59 |
| ATOM | 4257 | O   | ASP | 753 | 53.001 | -9.930 | 30.649 | 1.00 | 49.69 |
| ATOM | 4258 | N   | LEU | 754 | 53.903 | -8.009 | 29.889 | 1.00 | 47.21 |

|      |      |     |     |     |        |         |        |      |       |
|------|------|-----|-----|-----|--------|---------|--------|------|-------|
| ATOM | 4259 | CA  | LEU | 754 | 54.102 | -8.489  | 28.523 | 1.00 | 46.37 |
| ATOM | 4260 | CB  | LEU | 754 | 54.664 | -7.385  | 27.625 | 1.00 | 44.16 |
| ATOM | 4261 | CG  | LEU | 754 | 53.621 | -6.366  | 27.152 | 1.00 | 46.35 |
| ATOM | 4262 | CD1 | LEU | 754 | 54.296 | -5.272  | 26.343 | 1.00 | 45.11 |
| ATOM | 4263 | CD2 | LEU | 754 | 52.514 | -7.070  | 26.349 | 1.00 | 42.89 |
| ATOM | 4264 | C   | LEU | 754 | 55.004 | -9.703  | 28.481 | 1.00 | 47.08 |
| ATOM | 4265 | O   | LEU | 754 | 54.818 | -10.590 | 27.659 | 1.00 | 45.02 |
| ATOM | 4266 | N   | ASP | 755 | 55.969 | -9.755  | 29.385 | 1.00 | 49.68 |
| ATOM | 4267 | CA  | ASP | 755 | 56.890 | -10.876 | 29.487 | 1.00 | 51.62 |
| ATOM | 4268 | CB  | ASP | 755 | 57.883 | -10.586 | 30.615 | 1.00 | 54.90 |
| ATOM | 4269 | CG  | ASP | 755 | 59.009 | -11.589 | 30.702 | 1.00 | 59.00 |
| ATOM | 4270 | OD1 | ASP | 755 | 59.694 | -11.608 | 31.746 | 1.00 | 63.70 |
| ATOM | 4271 | OD2 | ASP | 755 | 59.223 | -12.346 | 29.728 | 1.00 | 60.31 |
| ATOM | 4272 | C   | ASP | 755 | 56.059 | -12.117 | 29.817 | 1.00 | 51.50 |
| ATOM | 4273 | O   | ASP | 755 | 56.119 | -13.150 | 29.138 | 1.00 | 47.11 |
| ATOM | 4274 | N   | ARG | 756 | 55.237 | -11.958 | 30.844 | 1.00 | 51.81 |
| ATOM | 4275 | CA  | ARG | 756 | 54.362 | -13.009 | 31.328 | 1.00 | 51.44 |
| ATOM | 4276 | CB  | ARG | 756 | 53.635 | -12.519 | 32.582 | 1.00 | 54.52 |
| ATOM | 4277 | CG  | ARG | 756 | 52.459 | -13.358 | 33.027 | 1.00 | 55.00 |
| ATOM | 4278 | CD  | ARG | 756 | 51.815 | -12.727 | 34.255 | 1.00 | 59.54 |
| ATOM | 4279 | NE  | ARG | 756 | 51.417 | -11.335 | 34.026 | 1.00 | 64.01 |
| ATOM | 4280 | CZ  | ARG | 756 | 50.366 | -10.960 | 33.301 | 1.00 | 65.76 |
| ATOM | 4281 | NH1 | ARG | 756 | 49.598 | -11.866 | 32.721 | 1.00 | 63.56 |
| ATOM | 4282 | NH2 | ARG | 756 | 50.061 | -9.676  | 33.183 | 1.00 | 66.59 |
| ATOM | 4283 | C   | ARG | 756 | 53.361 | -13.440 | 30.260 | 1.00 | 50.03 |
| ATOM | 4284 | O   | ARG | 756 | 53.267 | -14.622 | 29.960 | 1.00 | 49.98 |
| ATOM | 4285 | N   | ILE | 757 | 52.645 | -12.483 | 29.673 | 1.00 | 46.87 |
| ATOM | 4286 | CA  | ILE | 757 | 51.656 | -12.789 | 28.644 | 1.00 | 44.28 |
| ATOM | 4287 | CB  | ILE | 757 | 50.919 | -11.532 | 28.125 | 1.00 | 40.46 |
| ATOM | 4288 | CG2 | ILE | 757 | 49.923 | -11.923 | 27.062 | 1.00 | 38.44 |
| ATOM | 4289 | CG1 | ILE | 757 | 50.202 | -10.830 | 29.277 | 1.00 | 39.74 |
| ATOM | 4290 | CD1 | ILE | 757 | 49.481 | -9.551  | 28.920 | 1.00 | 40.68 |
| ATOM | 4291 | C   | ILE | 757 | 52.251 | -13.528 | 27.454 | 1.00 | 44.20 |
| ATOM | 4292 | O   | ILE | 757 | 51.643 | -14.469 | 26.959 | 1.00 | 40.28 |
| ATOM | 4293 | N   | VAL | 758 | 53.440 | -13.111 | 27.014 | 1.00 | 47.56 |
| ATOM | 4294 | CA  | VAL | 758 | 54.102 | -13.745 | 25.874 | 1.00 | 48.90 |
| ATOM | 4295 | CB  | VAL | 758 | 55.543 | -13.177 | 25.609 | 1.00 | 47.01 |
| ATOM | 4296 | CG1 | VAL | 758 | 56.198 | -13.920 | 24.456 | 1.00 | 44.38 |
| ATOM | 4297 | CG2 | VAL | 758 | 55.493 | -11.714 | 25.262 | 1.00 | 47.85 |
| ATOM | 4298 | C   | VAL | 758 | 54.249 | -15.232 | 26.149 | 1.00 | 51.79 |
| ATOM | 4299 | O   | VAL | 758 | 54.043 | -16.055 | 25.258 | 1.00 | 49.80 |
| ATOM | 4300 | N   | ALA | 759 | 54.622 | -15.550 | 27.386 | 1.00 | 54.80 |
| ATOM | 4301 | CA  | ALA | 759 | 54.825 | -16.925 | 27.814 | 1.00 | 57.15 |
| ATOM | 4302 | CB  | ALA | 759 | 55.406 | -16.948 | 29.212 | 1.00 | 56.77 |
| ATOM | 4303 | C   | ALA | 759 | 53.524 | -17.717 | 27.777 | 1.00 | 60.83 |
| ATOM | 4304 | O   | ALA | 759 | 53.487 | -18.849 | 27.296 | 1.00 | 63.59 |
| ATOM | 4305 | N   | LEU | 760 | 52.452 | -17.112 | 28.271 | 1.00 | 61.74 |
| ATOM | 4306 | CA  | LEU | 760 | 51.151 | -17.760 | 28.295 | 1.00 | 61.29 |
| ATOM | 4307 | CB  | LEU | 760 | 50.280 | -17.149 | 29.388 | 1.00 | 60.41 |
| ATOM | 4308 | CG  | LEU | 760 | 50.808 | -17.323 | 30.812 | 1.00 | 58.68 |
| ATOM | 4309 | CD1 | LEU | 760 | 49.917 | -16.603 | 31.815 | 1.00 | 59.64 |
| ATOM | 4310 | CD2 | LEU | 760 | 50.899 | -18.799 | 31.138 | 1.00 | 57.84 |

|      |      |     |     |      |         |         |        |      |       |
|------|------|-----|-----|------|---------|---------|--------|------|-------|
| ATOM | 4311 | C   | LEU | 760  | 50.439  | -17.706 | 26.951 | 1.00 | 63.42 |
| ATOM | 4312 | O   | LEU | 760  | 49.282  | -18.121 | 26.842 | 1.00 | 63.68 |
| ATOM | 4313 | N   | THR | 761  | 51.113  | -17.200 | 25.924 | 1.00 | 66.71 |
| ATOM | 4314 | CA  | THR | 761  | 50.512  | -17.109 | 24.586 | 1.00 | 68.48 |
| ATOM | 4315 | CB  | THR | 761  | 50.794  | -15.734 | 23.922 | 1.00 | 68.21 |
| ATOM | 4316 | OG1 | THR | 761  | 50.193  | -14.695 | 24.701 | 1.00 | 70.34 |
| ATOM | 4317 | CG2 | THR | 761  | 50.202  | -15.684 | 22.530 | 1.00 | 64.45 |
| ATOM | 4318 | C   | THR | 761  | 51.030  | -18.225 | 23.688 | 1.00 | 69.65 |
| ATOM | 4319 | O   | THR | 761  | 52.230  | -18.492 | 23.623 | 1.00 | 70.43 |
| ATOM | 4320 | SG  | CYS | 1603 | 18.668  | -9.074  | 20.131 | 0.50 | 30.57 |
| ATOM | 4321 | CG  | MET | 534  | 69.414  | 12.079  | 23.224 | 0.50 | 36.86 |
| ATOM | 4322 | SD  | MET | 534  | 69.162  | 13.149  | 24.646 | 0.50 | 40.20 |
| ATOM | 4323 | CE  | MET | 534  | 70.204  | 12.299  | 25.912 | 0.50 | 41.95 |
| ATOM | 4324 | SG  | CYS | 603  | 56.218  | -8.072  | 16.341 | 0.50 | 37.35 |
| ATOM | 4325 | OH2 | TIP | 1    | 71.863  | 25.340  | 2.719  | 1.00 | 24.40 |
| ATOM | 4326 | OH2 | TIP | 2    | 39.671  | 4.177   | 15.837 | 1.00 | 36.87 |
| ATOM | 4327 | OH2 | TIP | 3    | 83.765  | 19.802  | 10.549 | 1.00 | 26.81 |
| ATOM | 4328 | OH2 | TIP | 4    | 83.844  | 20.193  | 7.757  | 1.00 | 30.07 |
| ATOM | 4329 | OH2 | TIP | 5    | 75.192  | 16.430  | 6.693  | 1.00 | 26.76 |
| ATOM | 4330 | OH2 | TIP | 6    | 86.579  | 19.662  | 9.323  | 1.00 | 36.11 |
| ATOM | 4331 | OH2 | TIP | 7    | 52.204  | 10.911  | 24.392 | 1.00 | 36.83 |
| ATOM | 4332 | OH2 | TIP | 8    | 55.174  | 9.435   | 22.514 | 1.00 | 21.93 |
| ATOM | 4333 | OH2 | TIP | 9    | 57.077  | 4.556   | 32.580 | 1.00 | 25.17 |
| ATOM | 4334 | OH2 | TIP | 10   | 52.281  | 4.737   | 13.300 | 1.00 | 20.79 |
| ATOM | 4335 | OH2 | TIP | 11   | 41.402  | 5.304   | 22.893 | 1.00 | 39.17 |
| ATOM | 4336 | OH2 | TIP | 12   | 45.088  | 8.857   | 21.604 | 1.00 | 35.14 |
| ATOM | 4337 | OH2 | TIP | 13   | 64.519  | -2.772  | 28.799 | 1.00 | 47.52 |
| ATOM | 4338 | OH2 | TIP | 14   | 77.327  | 12.960  | 23.832 | 1.00 | 34.47 |
| ATOM | 4339 | OH2 | TIP | 15   | 79.366  | 17.021  | 18.247 | 1.00 | 47.49 |
| ATOM | 4340 | OH2 | TIP | 16   | 83.087  | 11.573  | 15.986 | 1.00 | 22.80 |
| ATOM | 4341 | OH2 | TIP | 17   | 13.977  | -9.804  | 0.222  | 1.00 | 24.88 |
| ATOM | 4342 | OH2 | TIP | 18   | 38.451  | 0.155   | 5.081  | 1.00 | 41.03 |
| ATOM | 4343 | OH2 | TIP | 20   | 27.109  | 6.286   | 4.902  | 1.00 | 27.69 |
| ATOM | 4344 | OH2 | TIP | 21   | 34.379  | -1.750  | 16.771 | 1.00 | 47.69 |
| ATOM | 4345 | OH2 | TIP | 22   | 20.394  | 2.449   | 27.821 | 1.00 | 54.32 |
| ATOM | 4346 | OH2 | TIP | 23   | 50.587  | -11.642 | 38.062 | 1.00 | 45.31 |
| ATOM | 4347 | OH2 | TIP | 24   | 17.137  | -5.949  | -1.716 | 1.00 | 27.63 |
| ATOM | 4348 | OH2 | TIP | 25   | 27.604  | 7.961   | 15.119 | 1.00 | 47.19 |
| ATOM | 4349 | OH2 | TIP | 26   | 31.446  | 0.136   | 6.605  | 1.00 | 29.98 |
| ATOM | 4350 | OH2 | TIP | 27   | 27.030  | -13.047 | 27.803 | 1.00 | 28.86 |
| ATOM | 4351 | OH2 | TIP | 28   | 28.477  | -17.191 | 13.067 | 1.00 | 37.44 |
| ATOM | 4352 | OH2 | TIP | 29   | 88.748  | 14.279  | 8.091  | 1.00 | 32.72 |
| ATOM | 4353 | OH2 | TIP | 30   | -2.392  | -3.684  | 11.343 | 1.00 | 41.86 |
| ATOM | 4354 | OH2 | TIP | 31   | 34.968  | -4.221  | 18.549 | 1.00 | 40.51 |
| ATOM | 4355 | OH2 | TIP | 32   | 80.581  | 17.982  | 9.655  | 1.00 | 27.85 |
| ATOM | 4356 | OH2 | TIP | 33   | 5.522   | 3.773   | 10.805 | 1.00 | 24.60 |
| ATOM | 4357 | OH2 | TIP | 34   | -10.747 | 5.416   | 11.174 | 1.00 | 29.27 |
| ATOM | 4358 | OH2 | TIP | 35   | 29.049  | -8.816  | 19.978 | 1.00 | 35.24 |
| ATOM | 4359 | OH2 | TIP | 36   | 5.871   | 3.463   | 13.481 | 1.00 | 26.62 |
| ATOM | 4360 | OH2 | TIP | 37   | 31.834  | 2.899   | 0.207  | 1.00 | 49.70 |
| ATOM | 4361 | OH2 | TIP | 38   | 19.799  | 2.012   | -3.941 | 1.00 | 29.67 |
| ATOM | 4362 | OH2 | TIP | 39   | 62.060  | 2.679   | 32.659 | 1.00 | 54.86 |

|      |      |     |     |    |         |         |        |      |       |
|------|------|-----|-----|----|---------|---------|--------|------|-------|
| ATOM | 4363 | OH2 | TIP | 40 | 21.100  | -6.883  | -4.054 | 1.00 | 22.33 |
| ATOM | 4364 | OH2 | TIP | 41 | -15.675 | 8.744   | 22.559 | 1.00 | 44.54 |
| ATOM | 4365 | OH2 | TIP | 42 | 40.066  | 2.225   | 8.567  | 1.00 | 57.00 |
| ATOM | 4366 | OH2 | TIP | 43 | 19.477  | 11.293  | -0.049 | 1.00 | 37.77 |
| ATOM | 4367 | OH2 | TIP | 44 | 67.060  | 9.047   | 17.334 | 1.00 | 25.14 |
| ATOM | 4368 | OH2 | TIP | 45 | 87.829  | 18.937  | 18.529 | 1.00 | 45.92 |
| ATOM | 4369 | OH2 | TIP | 46 | 74.741  | 16.956  | 3.987  | 1.00 | 40.33 |
| ATOM | 4370 | OH2 | TIP | 47 | 29.411  | 16.888  | 10.525 | 1.00 | 38.41 |
| ATOM | 4371 | OH2 | TIP | 48 | 66.592  | 7.020   | 15.108 | 1.00 | 36.15 |
| ATOM | 4372 | OH2 | TIP | 49 | 85.071  | 21.432  | 5.755  | 1.00 | 19.89 |
| ATOM | 4373 | OH2 | TIP | 50 | -4.842  | 3.281   | 3.118  | 1.00 | 28.22 |
| ATOM | 4374 | OH2 | TIP | 51 | 19.454  | 5.250   | 4.876  | 1.00 | 34.86 |
| ATOM | 4375 | OH2 | TIP | 53 | 34.785  | 5.433   | 24.743 | 1.00 | 30.40 |
| ATOM | 4376 | OH2 | TIP | 54 | 34.792  | -17.150 | 13.665 | 1.00 | 35.81 |
| ATOM | 4377 | OH2 | TIP | 55 | 59.956  | 7.380   | 27.941 | 1.00 | 36.76 |
| ATOM | 4378 | OH2 | TIP | 56 | -7.327  | -1.518  | 6.428  | 1.00 | 39.13 |
| ATOM | 4379 | OH2 | TIP | 57 | 55.164  | 12.120  | 25.338 | 1.00 | 38.87 |
| ATOM | 4380 | OH2 | TIP | 58 | 68.637  | 6.832   | 16.698 | 1.00 | 54.96 |
| ATOM | 4381 | OH2 | TIP | 59 | 73.778  | 20.869  | 19.031 | 1.00 | 35.01 |
| ATOM | 4382 | OH2 | TIP | 60 | 3.582   | -8.363  | -8.103 | 1.00 | 16.71 |
| ATOM | 4383 | OH2 | TIP | 61 | 38.051  | 10.933  | 5.487  | 1.00 | 32.85 |
| ATOM | 4384 | OH2 | TIP | 62 | 29.727  | -9.630  | -1.370 | 1.00 | 30.92 |
| ATOM | 4385 | OH2 | TIP | 64 | 49.186  | 1.253   | 12.066 | 1.00 | 42.67 |
| ATOM | 4386 | OH2 | TIP | 65 | 41.375  | 3.989   | 28.951 | 1.00 | 37.95 |
| ATOM | 4387 | OH2 | TIP | 66 | 10.798  | -13.119 | 1.125  | 1.00 | 38.26 |
| ATOM | 4388 | OH2 | TIP | 67 | -1.079  | -4.386  | 21.428 | 1.00 | 27.92 |
| ATOM | 4389 | OH2 | TIP | 68 | 30.327  | 16.346  | 13.295 | 1.00 | 53.21 |
| ATOM | 4390 | OH2 | TIP | 69 | 8.319   | 4.437   | 3.449  | 1.00 | 23.63 |
| ATOM | 4391 | OH2 | TIP | 70 | 73.152  | 18.809  | 22.631 | 1.00 | 36.45 |
| ATOM | 4392 | OH2 | TIP | 71 | -7.984  | -3.476  | 25.048 | 1.00 | 33.16 |
| ATOM | 4393 | OH2 | TIP | 72 | 66.529  | -4.720  | 28.421 | 1.00 | 66.32 |
| ATOM | 4394 | OH2 | TIP | 73 | 21.577  | -20.723 | 4.868  | 1.00 | 48.14 |
| ATOM | 4395 | OH2 | TIP | 74 | 59.417  | -6.760  | 4.957  | 1.00 | 48.73 |
| ATOM | 4396 | OH2 | TIP | 75 | 16.509  | -13.306 | -2.942 | 1.00 | 41.02 |
| ATOM | 4397 | OH2 | TIP | 76 | -15.064 | 7.473   | 4.275  | 1.00 | 26.77 |
| ATOM | 4398 | OH2 | TIP | 77 | 33.118  | 2.917   | 13.384 | 1.00 | 41.38 |
| ATOM | 4399 | OH2 | TIP | 78 | 0.112   | -2.913  | 10.809 | 1.00 | 27.49 |
| ATOM | 4400 | OH2 | TIP | 79 | 17.448  | 2.562   | 5.507  | 1.00 | 16.32 |
| ATOM | 4401 | OH2 | TIP | 81 | 27.445  | 3.796   | 6.134  | 1.00 | 29.83 |
| ATOM | 4402 | OH2 | TIP | 82 | -8.708  | 6.231   | 9.598  | 1.00 | 27.66 |
| ATOM | 4403 | OH2 | TIP | 83 | 1.565   | -1.998  | 8.758  | 1.00 | 33.46 |
| ATOM | 4404 | OH2 | TIP | 84 | -4.774  | -3.153  | 7.049  | 1.00 | 36.59 |
| ATOM | 4405 | OH2 | TIP | 85 | 17.443  | 3.105   | 1.795  | 1.00 | 20.39 |
| ATOM | 4406 | OH2 | TIP | 86 | 20.120  | 3.387   | 2.918  | 1.00 | 30.35 |
| ATOM | 4407 | OH2 | TIP | 87 | 0.466   | -2.238  | 22.190 | 1.00 | 20.30 |
| ATOM | 4408 | OH2 | TIP | 88 | 19.749  | -6.018  | -1.687 | 1.00 | 21.33 |
| ATOM | 4409 | OH2 | TIP | 89 | 10.505  | -15.695 | 6.861  | 1.00 | 38.80 |
| ATOM | 4410 | OH2 | TIP | 90 | 4.223   | -12.113 | 11.774 | 1.00 | 34.18 |
| ATOM | 4411 | OH2 | TIP | 91 | 6.297   | 1.090   | -3.192 | 1.00 | 24.40 |
| ATOM | 4412 | OH2 | TIP | 92 | -13.540 | 1.554   | 5.413  | 1.00 | 34.94 |
| ATOM | 4413 | OH2 | TIP | 93 | 15.607  | -7.315  | 0.017  | 1.00 | 26.30 |
| ATOM | 4414 | OH2 | TIP | 94 | -1.868  | -5.461  | 3.839  | 1.00 | 37.12 |

|      |      |     |     |     |         |         |        |      |       |
|------|------|-----|-----|-----|---------|---------|--------|------|-------|
| ATOM | 4415 | OH2 | TIP | 95  | 12.718  | 5.095   | -4.401 | 1.00 | 40.61 |
| ATOM | 4416 | OH2 | TIP | 96  | 69.849  | 27.233  | 2.056  | 1.00 | 41.42 |
| ATOM | 4417 | OH2 | TIP | 97  | 24.374  | -13.311 | 0.143  | 1.00 | 52.75 |
| ATOM | 4418 | OH2 | TIP | 98  | 60.424  | -4.582  | 34.237 | 1.00 | 42.02 |
| ATOM | 4419 | OH2 | TIP | 99  | 10.589  | 5.757   | 3.485  | 1.00 | 61.53 |
| ATOM | 4420 | OH2 | TIP | 100 | -9.564  | -3.999  | 4.718  | 1.00 | 29.02 |
| ATOM | 4421 | OH2 | TIP | 101 | 73.085  | -1.967  | 10.565 | 1.00 | 59.23 |
| ATOM | 4422 | OH2 | TIP | 102 | -3.172  | 5.701   | 30.623 | 1.00 | 30.51 |
| ATOM | 4423 | OH2 | TIP | 103 | 36.672  | 0.620   | 11.780 | 1.00 | 53.77 |
| ATOM | 4424 | OH2 | TIP | 104 | 21.408  | 6.462   | 16.955 | 1.00 | 27.62 |
| ATOM | 4425 | OH2 | TIP | 105 | 31.224  | 0.791   | 19.345 | 1.00 | 77.65 |
| ATOM | 4426 | OH2 | TIP | 106 | 5.660   | -8.451  | 22.197 | 1.00 | 49.50 |
| ATOM | 4427 | OH2 | TIP | 107 | -12.988 | 8.471   | 17.441 | 1.00 | 31.69 |
| ATOM | 4428 | OH2 | TIP | 108 | 26.733  | -10.524 | -0.894 | 1.00 | 25.26 |
| ATOM | 4429 | OH2 | TIP | 109 | 24.182  | 2.026   | 18.156 | 1.00 | 35.87 |
| ATOM | 4430 | OH2 | TIP | 110 | -1.822  | 12.848  | 3.561  | 1.00 | 35.44 |
| ATOM | 4431 | OH2 | TIP | 111 | 59.584  | 13.491  | 33.225 | 1.00 | 40.47 |
| ATOM | 4432 | OH2 | TIP | 112 | 4.402   | -10.813 | 1.929  | 1.00 | 47.07 |
| ATOM | 4433 | OH2 | TIP | 113 | 8.032   | 2.916   | 0.940  | 1.00 | 40.79 |
| ATOM | 4434 | OH2 | TIP | 114 | 75.905  | 1.522   | 25.912 | 1.00 | 55.51 |
| ATOM | 4435 | OH2 | TIP | 115 | 48.960  | 15.737  | 14.249 | 1.00 | 38.97 |
| ATOM | 4436 | OH2 | TIP | 116 | 2.333   | -11.271 | 9.174  | 1.00 | 29.12 |
| ATOM | 4437 | OH2 | TIP | 117 | 83.062  | 26.404  | 12.925 | 1.00 | 41.17 |
| ATOM | 4438 | OH2 | TIP | 118 | 8.816   | -6.440  | -3.424 | 1.00 | 48.26 |
| ATOM | 4439 | OH2 | TIP | 119 | -8.594  | 4.575   | 4.258  | 1.00 | 32.68 |
| ATOM | 4440 | OH2 | TIP | 120 | 7.695   | -13.769 | 8.481  | 1.00 | 39.22 |
| ATOM | 4441 | OH2 | TIP | 121 | 51.500  | 6.285   | 10.369 | 1.00 | 25.18 |
| ATOM | 4442 | OH2 | TIP | 122 | 20.720  | 3.849   | 15.625 | 1.00 | 22.46 |
| ATOM | 4443 | OH2 | TIP | 123 | 73.111  | 3.718   | 20.617 | 1.00 | 28.26 |
| ATOM | 4444 | OH2 | TIP | 124 | 5.312   | -11.608 | 22.516 | 1.00 | 32.74 |
| ATOM | 4445 | OH2 | TIP | 125 | 34.207  | 2.437   | 16.601 | 1.00 | 65.04 |
| ATOM | 4446 | OH2 | TIP | 126 | 9.535   | -11.998 | 7.085  | 1.00 | 25.13 |
| ATOM | 4447 | OH2 | TIP | 127 | 8.227   | 3.912   | -1.495 | 1.00 | 43.73 |
| ATOM | 4448 | OH2 | TIP | 129 | 7.312   | 7.072   | 2.922  | 1.00 | 47.65 |
| ATOM | 4449 | OH2 | TIP | 130 | 35.824  | -1.660  | 0.135  | 1.00 | 30.43 |
| ATOM | 4450 | OH2 | TIP | 131 | 44.723  | 10.285  | 11.144 | 1.00 | 32.74 |
| ATOM | 4451 | OH2 | TIP | 132 | 27.941  | -13.172 | 18.733 | 1.00 | 58.65 |
| ATOM | 4452 | OH2 | TIP | 133 | 45.301  | 11.497  | 21.408 | 1.00 | 35.00 |
| ATOM | 4453 | OH2 | TIP | 134 | 57.705  | -10.824 | 14.202 | 1.00 | 69.18 |
| ATOM | 4454 | OH2 | TIP | 135 | -3.108  | 15.385  | 16.685 | 1.00 | 38.07 |
| ATOM | 4455 | OH2 | TIP | 136 | 85.884  | 11.182  | 9.044  | 1.00 | 32.04 |
| ATOM | 4456 | OH2 | TIP | 137 | 12.840  | -2.444  | 1.983  | 1.00 | 30.08 |
| ATOM | 4457 | OH2 | TIP | 138 | 75.645  | 3.496   | 20.607 | 1.00 | 33.94 |
| ATOM | 4458 | OH2 | TIP | 139 | 13.020  | 7.518   | -2.510 | 1.00 | 40.68 |
| ATOM | 4459 | OH2 | TIP | 140 | 11.245  | -10.070 | 0.729  | 1.00 | 26.02 |
| ATOM | 4460 | OH2 | TIP | 141 | 59.563  | 10.829  | 14.466 | 1.00 | 71.34 |
| ATOM | 4461 | OH2 | TIP | 142 | 13.671  | -16.214 | 3.489  | 1.00 | 39.47 |
| ATOM | 4462 | OH2 | TIP | 143 | -6.358  | -3.421  | 16.520 | 1.00 | 37.08 |
| ATOM | 4463 | OH2 | TIP | 144 | 25.629  | -12.764 | 3.534  | 1.00 | 50.51 |
| ATOM | 4464 | OH2 | TIP | 145 | -16.459 | 10.869  | 6.524  | 1.00 | 38.40 |
| ATOM | 4465 | OH2 | TIP | 146 | 86.598  | 12.840  | 7.028  | 1.00 | 47.80 |
| ATOM | 4466 | OH2 | TIP | 147 | 32.139  | -4.674  | 1.757  | 1.00 | 32.43 |



|      |      |         |     |         |         |        |      |       |
|------|------|---------|-----|---------|---------|--------|------|-------|
| ATOM | 4467 | OH2 TIP | 148 | 44.890  | 7.505   | 11.806 | 1.00 | 32.46 |
| ATOM | 4468 | OH2 TIP | 149 | 80.781  | 12.432  | 16.562 | 1.00 | 47.77 |
| ATOM | 4469 | OH2 TIP | 150 | 3.017   | -7.101  | -1.917 | 1.00 | 40.92 |
| ATOM | 4470 | OH2 TIP | 151 | 31.784  | -6.139  | 20.968 | 1.00 | 38.23 |
| ATOM | 4471 | OH2 TIP | 152 | 74.835  | -2.597  | 12.290 | 1.00 | 48.89 |
| ATOM | 4472 | OH2 TIP | 153 | 7.509   | 6.768   | -1.083 | 1.00 | 46.02 |
| ATOM | 4473 | OH2 TIP | 154 | 71.732  | 5.360   | 21.908 | 1.00 | 33.30 |
| ATOM | 4474 | OH2 TIP | 155 | 68.150  | -5.075  | 8.794  | 1.00 | 39.31 |
| ATOM | 4475 | OH2 TIP | 156 | 0.148   | -9.544  | 6.872  | 1.00 | 41.37 |
| ATOM | 4476 | OH2 TIP | 157 | 67.878  | 18.204  | 10.861 | 1.00 | 51.19 |
| ATOM | 4477 | OH2 TIP | 158 | 3.652   | 8.829   | 4.428  | 1.00 | 31.24 |
| ATOM | 4478 | OH2 TIP | 159 | 52.100  | 11.362  | 18.433 | 1.00 | 40.73 |
| ATOM | 4479 | OH2 TIP | 161 | -10.357 | 6.783   | 4.861  | 1.00 | 35.13 |
| ATOM | 4480 | OH2 TIP | 162 | 76.471  | 1.562   | -0.853 | 1.00 | 59.17 |
| ATOM | 4481 | OH2 TIP | 163 | 10.073  | -12.056 | 17.071 | 1.00 | 44.69 |
| ATOM | 4482 | OH2 TIP | 164 | 34.163  | 14.271  | 18.254 | 1.00 | 39.59 |
| ATOM | 4483 | OH2 TIP | 165 | 2.320   | -7.990  | 16.820 | 1.00 | 38.19 |
| ATOM | 4484 | OH2 TIP | 166 | 29.696  | 1.908   | 6.098  | 1.00 | 38.02 |
| ATOM | 4485 | OH2 TIP | 167 | 32.626  | -17.410 | 11.766 | 1.00 | 48.15 |
| ATOM | 4486 | OH2 TIP | 168 | 42.244  | 18.049  | 11.043 | 1.00 | 50.95 |
| ATOM | 4487 | OH2 TIP | 169 | 87.907  | 10.574  | 5.721  | 1.00 | 60.28 |
| ATOM | 4488 | OH2 TIP | 170 | 70.313  | -3.998  | 25.141 | 1.00 | 72.64 |
| ATOM | 4489 | OH2 TIP | 171 | 77.603  | 5.679   | 23.952 | 1.00 | 43.23 |
| ATOM | 4490 | OH2 TIP | 172 | -0.942  | -8.153  | 4.508  | 1.00 | 55.10 |
| ATOM | 4491 | OH2 TIP | 173 | 34.297  | 15.574  | 1.690  | 1.00 | 34.19 |
| ATOM | 4492 | OH2 TIP | 174 | -9.643  | 7.829   | 7.414  | 1.00 | 50.48 |
| ATOM | 4493 | OH2 TIP | 175 | 11.618  | 5.655   | 7.455  | 1.00 | 43.37 |
| ATOM | 4494 | OH2 TIP | 176 | -8.705  | 13.841  | 13.642 | 1.00 | 72.49 |
| ATOM | 4495 | OH2 TIP | 177 | 32.009  | 3.416   | 18.257 | 1.00 | 44.16 |
| ATOM | 4496 | OH2 TIP | 178 | -8.651  | 10.180  | 24.352 | 1.00 | 44.85 |
| ATOM | 4497 | OH2 TIP | 179 | -1.153  | -6.532  | 15.548 | 1.00 | 32.90 |
| ATOM | 4498 | OH2 TIP | 180 | 80.235  | 0.749   | 15.508 | 1.00 | 34.75 |
| ATOM | 4499 | OH2 TIP | 181 | 67.222  | 20.490  | -1.574 | 1.00 | 40.76 |
| ATOM | 4500 | OH2 TIP | 182 | -0.471  | 4.367   | 1.248  | 1.00 | 36.58 |
| ATOM | 4501 | OH2 TIP | 183 | 0.149   | 6.517   | 2.578  | 1.00 | 40.12 |
| ATOM | 4502 | OH2 TIP | 184 | -1.186  | 8.867   | 1.311  | 1.00 | 44.77 |
| ATOM | 4503 | OH2 TIP | 185 | -5.093  | 9.260   | 2.252  | 1.00 | 52.07 |
| ATOM | 4504 | OH2 TIP | 186 | -7.235  | 10.227  | 3.913  | 1.00 | 58.53 |
| ATOM | 4505 | OH2 TIP | 187 | 2.724   | 7.169   | 0.879  | 1.00 | 47.77 |
| ATOM | 4506 | OH2 TIP | 188 | 5.527   | 11.031  | 8.519  | 1.00 | 34.40 |
| ATOM | 4507 | OH2 TIP | 189 | 63.927  | 12.721  | 22.689 | 1.00 | 40.75 |
| ATOM | 4508 | OH2 TIP | 190 | 79.264  | 1.066   | 18.321 | 1.00 | 41.34 |
| ATOM | 4509 | OH2 TIP | 191 | 59.247  | -11.825 | 7.256  | 1.00 | 79.86 |
| ATOM | 4510 | OH2 TIP | 192 | 13.994  | -0.972  | -4.310 | 1.00 | 31.15 |
| ATOM | 4511 | OH2 TIP | 193 | 59.546  | 3.024   | 33.227 | 1.00 | 40.34 |
| ATOM | 4512 | OH2 TIP | 194 | 32.179  | 13.637  | 19.964 | 1.00 | 48.25 |
| ATOM | 4513 | OH2 TIP | 195 | 72.178  | 16.188  | 22.879 | 1.00 | 42.72 |
| ATOM | 4514 | OH2 TIP | 196 | 0.898   | -8.663  | 14.348 | 1.00 | 41.76 |
| ATOM | 4515 | OH2 TIP | 197 | -0.490  | 5.455   | 30.574 | 1.00 | 38.30 |
| ATOM | 4516 | OH2 TIP | 199 | -1.277  | -4.244  | 27.691 | 1.00 | 56.27 |
| ATOM | 4517 | OH2 TIP | 200 | 81.605  | 15.360  | 17.272 | 1.00 | 42.05 |
| ATOM | 4518 | OH2 TIP | 201 | -17.534 | 4.081   | 23.779 | 1.00 | 59.65 |

|      |      |     |     |     |         |         |        |      |       |
|------|------|-----|-----|-----|---------|---------|--------|------|-------|
| ATOM | 4519 | OH2 | TIP | 202 | 27.748  | 10.634  | 14.595 | 1.00 | 49.97 |
| ATOM | 4520 | OH2 | TIP | 203 | 34.891  | 4.468   | 27.604 | 1.00 | 60.26 |
| ATOM | 4521 | OH2 | TIP | 204 | -3.460  | -4.448  | 9.045  | 1.00 | 44.70 |
| ATOM | 4522 | OH2 | TIP | 205 | 42.705  | 7.590   | 22.526 | 1.00 | 35.77 |
| ATOM | 4523 | OH2 | TIP | 206 | 52.983  | 11.950  | 21.969 | 1.00 | 35.12 |
| ATOM | 4524 | OH2 | TIP | 207 | 26.871  | 14.098  | 19.820 | 1.00 | 53.04 |
| ATOM | 4525 | OH2 | TIP | 208 | -7.184  | 9.323   | 6.370  | 1.00 | 37.49 |
| ATOM | 4526 | OH2 | TIP | 209 | 86.676  | 5.553   | 15.911 | 1.00 | 72.92 |
| ATOM | 4527 | OH2 | TIP | 210 | 55.080  | 15.928  | 20.414 | 1.00 | 68.75 |
| ATOM | 4528 | OH2 | TIP | 211 | 51.512  | 19.264  | 22.672 | 1.00 | 54.72 |
| ATOM | 4529 | OH2 | TIP | 212 | 19.988  | 7.127   | 6.976  | 1.00 | 45.55 |
| ATOM | 4530 | OH2 | TIP | 213 | 28.905  | 2.021   | -3.430 | 1.00 | 48.55 |
| ATOM | 4531 | OH2 | TIP | 214 | 26.446  | 2.593   | -4.753 | 1.00 | 55.04 |
| ATOM | 4532 | OH2 | TIP | 215 | 36.539  | 2.911   | 18.446 | 1.00 | 38.50 |
| ATOM | 4533 | OH2 | TIP | 216 | 16.807  | -20.725 | 14.119 | 1.00 | 56.03 |
| ATOM | 4534 | OH2 | TIP | 217 | 28.203  | -14.485 | 6.172  | 1.00 | 62.90 |
| ATOM | 4535 | OH2 | TIP | 218 | 31.519  | 1.503   | -2.010 | 1.00 | 56.19 |
| ATOM | 4536 | OH2 | TIP | 219 | 10.014  | -16.571 | 15.451 | 1.00 | 46.37 |
| ATOM | 4537 | OH2 | TIP | 220 | 7.126   | -11.922 | 5.526  | 1.00 | 56.89 |
| ATOM | 4538 | OH2 | TIP | 221 | -12.414 | 14.643  | 10.965 | 1.00 | 67.36 |
| ATOM | 4539 | OH2 | TIP | 222 | 10.978  | 9.734   | -1.436 | 1.00 | 38.81 |
| ATOM | 4540 | OH2 | TIP | 223 | 11.293  | 12.362  | -1.306 | 1.00 | 52.56 |
| ATOM | 4541 | OH2 | TIP | 224 | 34.011  | 13.162  | -1.255 | 1.00 | 52.58 |
| ATOM | 4542 | OH2 | TIP | 225 | 31.195  | 17.923  | 8.021  | 1.00 | 75.88 |
| ATOM | 4543 | OH2 | TIP | 226 | 36.957  | 11.949  | -1.947 | 1.00 | 50.99 |
| ATOM | 4544 | OH2 | TIP | 227 | 35.179  | 3.114   | 10.888 | 1.00 | 58.55 |
| ATOM | 4545 | OH2 | TIP | 228 | 64.027  | 13.281  | 26.577 | 1.00 | 51.98 |
| ATOM | 4546 | OH2 | TIP | 229 | 36.514  | 6.155   | 15.292 | 1.00 | 45.57 |
| ATOM | 4547 | OH2 | TIP | 230 | 90.627  | 4.339   | 6.386  | 1.00 | 56.65 |
| ATOM | 4548 | OH2 | TIP | 231 | 49.907  | -11.937 | 10.792 | 1.00 | 53.49 |
| ATOM | 4549 | OH2 | TIP | 232 | 60.296  | -10.212 | 16.610 | 1.00 | 79.85 |
| ATOM | 4550 | OH2 | TIP | 233 | 18.154  | -21.314 | 7.018  | 1.00 | 53.60 |
| ATOM | 4551 | OH2 | TIP | 234 | 66.186  | -1.068  | 30.882 | 1.00 | 56.92 |
| ATOM | 4552 | OH2 | TIP | 235 | 75.153  | 18.983  | 20.700 | 1.00 | 34.22 |
| ATOM | 4553 | OH2 | TIP | 236 | -2.885  | 10.207  | 3.295  | 1.00 | 68.34 |
| ATOM | 4554 | OH2 | TIP | 237 | 5.834   | -3.507  | 25.370 | 1.00 | 34.75 |
| ATOM | 4555 | OH2 | TIP | 238 | 35.910  | 6.163   | 12.569 | 1.00 | 37.31 |
| ATOM | 4556 | OH2 | TIP | 239 | -5.494  | 16.637  | 14.033 | 1.00 | 65.17 |
| ATOM | 4557 | OH2 | TIP | 240 | 46.332  | -11.698 | 26.865 | 1.00 | 55.30 |
| ATOM | 4558 | OH2 | TIP | 241 | 6.179   | 6.434   | 13.895 | 1.00 | 45.92 |
| ATOM | 4559 | OH2 | TIP | 242 | -3.869  | -4.958  | 20.821 | 1.00 | 41.96 |
| ATOM | 4560 | OH2 | TIP | 243 | 1.690   | -3.598  | -0.200 | 1.00 | 41.42 |
| ATOM | 4561 | OH2 | TIP | 244 | 86.181  | 11.454  | 23.000 | 1.00 | 56.22 |
| ATOM | 4562 | OH2 | TIP | 245 | 10.501  | 7.621   | 5.627  | 1.00 | 77.40 |
| ATOM | 4563 | OH2 | TIP | 246 | 5.007   | 8.485   | 2.181  | 1.00 | 89.31 |
| ATOM | 4564 | OH2 | TIP | 247 | 64.552  | -8.093  | 20.595 | 1.00 | 45.86 |
| ATOM | 4565 | OH2 | TIP | 248 | 11.243  | -17.828 | 13.332 | 1.00 | 65.30 |
| ATOM | 4566 | OH2 | TIP | 249 | 42.226  | -6.785  | 14.857 | 1.00 | 81.78 |
| ATOM | 4567 | OH2 | TIP | 250 | 2.875   | -4.176  | 22.032 | 1.00 | 53.45 |
| ATOM | 4568 | OH2 | TIP | 251 | 72.048  | 1.134   | -2.037 | 1.00 | 38.85 |
| ATOM | 4569 | OH2 | TIP | 252 | 50.357  | -3.142  | 32.887 | 1.00 | 67.13 |
| ATOM | 4570 | OH2 | TIP | 254 | 57.772  | 9.500   | 11.808 | 1.00 | 40.03 |

|      |      |     |     |      |         |         |        |      |       |
|------|------|-----|-----|------|---------|---------|--------|------|-------|
| ATOM | 4571 | OH2 | TIP | 255  | 43.306  | 20.459  | 30.366 | 1.00 | 47.59 |
| ATOM | 4572 | OH2 | TIP | 256  | 67.064  | 16.514  | 15.765 | 1.00 | 57.51 |
| ATOM | 4573 | OH2 | TIP | 257  | 87.612  | 21.648  | 5.147  | 1.00 | 70.52 |
| ATOM | 4574 | OH2 | TIP | 258  | 21.095  | 9.853   | -9.308 | 1.00 | 78.97 |
| ATOM | 4575 | OH2 | TIP | 261  | 71.914  | 28.544  | 7.912  | 1.00 | 83.90 |
| ATOM | 4576 | OH2 | TIP | 262  | 25.727  | -8.133  | 27.190 | 1.00 | 54.87 |
| ATOM | 4577 | OH2 | TIP | 263  | -18.738 | 10.877  | 12.767 | 1.00 | 71.80 |
| ATOM | 4578 | OH2 | TIP | 264  | 30.524  | 11.543  | 16.329 | 1.00 | 46.98 |
| ATOM | 4579 | OH2 | TIP | 265  | 22.211  | -16.242 | -2.763 | 1.00 | 55.17 |
| ATOM | 4580 | OH2 | TIP | 266  | 29.755  | 9.037   | 18.396 | 1.00 | 67.93 |
| ATOM | 4581 | C1  | MON | 1000 | 67.458  | 4.500   | 11.935 | 1.00 | 0.00  |
| ATOM | 4582 | C2  | MON | 1000 | 67.015  | 3.958   | 10.687 | 1.00 | 0.00  |
| ATOM | 4583 | N3  | MON | 1000 | 67.367  | 2.732   | 10.160 | 1.00 | 0.00  |
| ATOM | 4584 | C4  | MON | 1000 | 66.127  | 4.618   | 9.793  | 1.00 | 0.00  |
| ATOM | 4585 | C5  | MON | 1000 | 65.620  | 5.919   | 10.125 | 1.00 | 0.00  |
| ATOM | 4586 | C6  | MON | 1000 | 66.041  | 6.508   | 11.380 | 1.00 | 0.00  |
| ATOM | 4587 | C7  | MON | 1000 | 66.948  | 5.809   | 12.276 | 1.00 | 0.00  |
| ATOM | 4588 | C8  | MON | 1000 | 65.933  | 3.759   | 8.668  | 1.00 | 0.00  |
| ATOM | 4589 | C10 | MON | 1000 | 66.745  | 2.518   | 8.922  | 1.00 | 0.00  |
| ATOM | 4590 | C11 | MON | 1000 | 65.043  | 4.051   | 7.483  | 1.00 | 0.00  |
| ATOM | 4591 | O12 | MON | 1000 | 66.862  | 1.516   | 8.241  | 1.00 | 0.00  |
| ATOM | 4592 | C13 | MON | 1000 | 64.479  | 2.990   | 6.570  | 1.00 | 0.00  |
| ATOM | 4593 | C14 | MON | 1000 | 63.459  | 3.330   | 5.617  | 1.00 | 0.00  |
| ATOM | 4594 | C15 | MON | 1000 | 62.923  | 2.333   | 4.727  | 1.00 | 0.00  |
| ATOM | 4595 | C16 | MON | 1000 | 63.379  | 0.956   | 4.754  | 1.00 | 0.00  |
| ATOM | 4596 | C17 | MON | 1000 | 64.960  | 1.637   | 6.605  | 1.00 | 0.00  |
| ATOM | 4597 | C18 | MON | 1000 | 64.418  | 0.642   | 5.713  | 1.00 | 0.00  |
| ATOM | 4598 | N19 | MON | 1000 | 62.848  | -0.025  | 3.880  | 1.00 | 0.00  |
| ATOM | 4599 | C20 | MON | 1000 | 63.429  | -1.407  | 3.816  | 1.00 | 0.00  |
| ATOM | 4600 | C21 | MON | 1000 | 61.888  | 0.343   | 2.786  | 1.00 | 0.00  |
| ATOM | 4601 | C22 | MON | 1000 | 61.085  | -0.818  | 2.152  | 1.00 | 0.00  |
| ATOM | 4602 | N23 | MON | 1000 | 61.868  | -2.035  | 1.930  | 1.00 | 0.00  |
| ATOM | 4603 | C24 | MON | 1000 | 62.562  | -2.492  | 3.133  | 1.00 | 0.00  |
| ATOM | 4604 | O25 | MON | 1000 | 61.481  | -2.328  | -0.389 | 1.00 | 0.00  |
| ATOM | 4605 | C26 | MON | 1000 | 62.001  | -2.670  | 0.659  | 1.00 | 0.00  |
| ATOM | 4606 | C1  | MON | 1001 | 5.458   | 3.340   | 18.422 | 1.00 | 0.00  |
| ATOM | 4607 | C2  | MON | 1001 | 6.049   | 3.475   | 19.718 | 1.00 | 0.00  |
| ATOM | 4608 | N3  | MON | 1001 | 5.935   | 2.580   | 20.763 | 1.00 | 0.00  |
| ATOM | 4609 | C4  | MON | 1001 | 6.857   | 4.573   | 20.124 | 1.00 | 0.00  |
| ATOM | 4610 | C5  | MON | 1001 | 7.121   | 5.641   | 19.202 | 1.00 | 0.00  |
| ATOM | 4611 | C6  | MON | 1001 | 6.543   | 5.548   | 17.877 | 1.00 | 0.00  |
| ATOM | 4612 | C7  | MON | 1001 | 5.722   | 4.412   | 17.489 | 1.00 | 0.00  |
| ATOM | 4613 | C8  | MON | 1001 | 7.250   | 4.340   | 21.477 | 1.00 | 0.00  |
| ATOM | 4614 | C10 | MON | 1001 | 6.647   | 3.023   | 21.886 | 1.00 | 0.00  |
| ATOM | 4615 | C11 | MON | 1001 | 8.138   | 5.242   | 22.302 | 1.00 | 0.00  |
| ATOM | 4616 | O12 | MON | 1001 | 6.735   | 2.426   | 22.943 | 1.00 | 0.00  |
| ATOM | 4617 | C13 | MON | 1001 | 8.918   | 4.783   | 23.509 | 1.00 | 0.00  |
| ATOM | 4618 | C14 | MON | 1001 | 9.913   | 5.641   | 24.091 | 1.00 | 0.00  |
| ATOM | 4619 | C15 | MON | 1001 | 10.654  | 5.224   | 25.253 | 1.00 | 0.00  |
| ATOM | 4620 | C16 | MON | 1001 | 10.435  | 3.935   | 25.881 | 1.00 | 0.00  |
| ATOM | 4621 | C17 | MON | 1001 | 8.670   | 3.508   | 24.123 | 1.00 | 0.00  |
| ATOM | 4622 | C18 | MON | 1001 | 9.416   | 3.095   | 25.285 | 1.00 | 0.00  |

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|      |      |     |     |      |        |       |        |      |      |
|------|------|-----|-----|------|--------|-------|--------|------|------|
| ATOM | 4623 | N19 | MON | 1001 | 11.168 | 3.525 | 27.023 | 1.00 | 0.00 |
| ATOM | 4624 | C20 | MON | 1001 | 10.831 | 2.255 | 27.749 | 1.00 | 0.00 |
| ATOM | 4625 | C21 | MON | 1001 | 12.107 | 4.463 | 27.725 | 1.00 | 0.00 |
| ATOM | 4626 | C22 | MON | 1001 | 13.125 | 3.821 | 28.698 | 1.00 | 0.00 |
| ATOM | 4627 | N23 | MON | 1001 | 12.570 | 2.742 | 29.518 | 1.00 | 0.00 |
| ATOM | 4628 | C24 | MON | 1001 | 11.902 | 1.711 | 28.725 | 1.00 | 0.00 |
| ATOM | 4629 | O25 | MON | 1001 | 13.118 | 3.569 | 31.669 | 1.00 | 0.00 |
| ATOM | 4630 | C26 | MON | 1001 | 12.610 | 2.731 | 30.944 | 1.00 | 0.00 |

CLAIMS

What is claimed is:

5

1. A crystalline form of a polypeptide corresponding to the catalytic domain of a protein tyrosine kinase.

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2. The crystalline form of claim 1, wherein said protein tyrosine kinase is a receptor protein tyrosine kinase.

15

3. The crystalline form of claim 2, wherein said receptor protein tyrosine kinase is selected from the group consisting of PDGF-R, FLK, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK.

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4. The crystalline form of claim 1, wherein said protein tyrosine kinase is a non-receptor protein tyrosine kinase.

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5. The crystalline form of claim 4, wherein said non-receptor protein tyrosine kinase is selected from a group consisting of SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK.

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6. The crystalline form of claim 1, comprising one or more heavy metal atoms.

7. The crystalline form of claim 1, wherein said

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protein tyrosine kinase is FGFR.

8. The crystalline form of claim 7, wherein said FGFR is FGFR1.

5

9. The crystalline form of claim 8, defined by atomic structural coordinates set forth in Table 1.

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10. The crystalline form of claim 7, comprising at least one compound.

11. The crystalline form of claim 10, wherein said compound is a nucleotide analog.

15

12. The crystalline form of claim 11, wherein said nucleotide analog is AMP-PCP.

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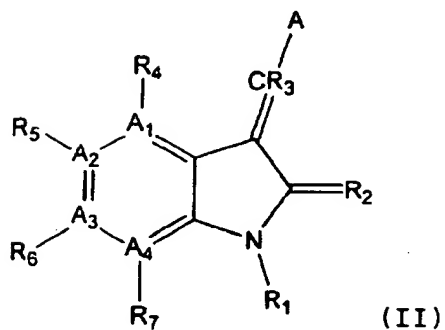
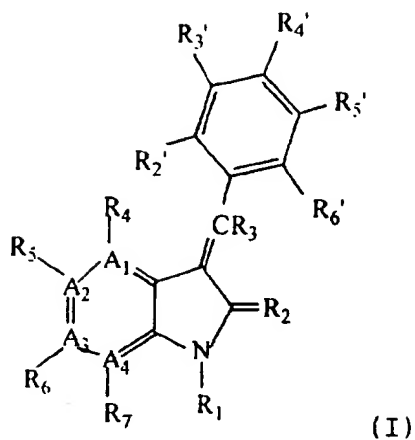
13. The crystalline form of claim 12, defined by atomic structural coordinates set forth in Table 2.

14. The crystalline form of claim 10, wherein said compound is an indolinone compound.

25

15. The crystalline form of claim 14, wherein said indolinone compound has a structure set forth in formula I or II:

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or a pharmaceutically acceptable salt, isomer, metabolite, ester, amide, or prodrug thereof, wherein

5 (a)  $A_1$ ,  $A_2$ ,  $A_3$ , and  $A_4$  are independently carbon or nitrogen;

(b)  $R_1$  is hydrogen or alkyl;

(c)  $R_2$  is oxygen in the case of an oxindolinone or sulfur in the case of a thiolindolinone;

10 (d)  $R_3$  is hydrogen;

(e)  $R_4$ ,  $R_5$ ,  $R_6$ , and  $R_7$  are optionally present and are

either (i) independently selected from the group consisting of hydrogen, alkyl, alkoxy, aryl, aryloxy, alkaryl, alkaryloxy, halogen, trihalomethyl, S(O)R, SO<sub>2</sub>NRR', SO<sub>3</sub>R, SR, NO<sub>2</sub>, NRR', OH, CN, C(O)R, OC(O)R, NHC(O)R, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R, and CONRR' or (ii) any two adjacent R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R, taken together form a fused ring with the aryl portion of the oxindole-based portion of the indolinone;

(f) R<sub>2</sub>', R<sub>3</sub>', R<sub>4</sub>', R<sub>5</sub>', and R<sub>6</sub>' are each independently selected from the group consisting of hydrogen, alkyl, alkoxy, aryl, aryloxy, alkaryl, alkaryloxy, halogen, trihalomethyl, S(O)R, SO<sub>2</sub>NRR', SO<sub>3</sub>R, SR, NO<sub>2</sub>, NRR', OH, CN, C(O)R, OC(O)R, NHC(O)R, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R, and CONRR';

(g) n is 0, 1, 2, or 3;

(h) R is hydrogen, alkyl or aryl;

(i) R' is hydrogen, alkyl or aryl; and

(j) A is a five membered heteroaryl ring selected from the group consisting of thiophene, pyrrole, pyrazole, imidazole, 1,2,3-triazole, 1,2,4-triazole, oxazole, isoxazole, thiazole, isothiazole, furan, 1,2,3-oxadiazole, 1,2,4-oxadiazole, 1,2,5-oxadiazole, 1,3,4-oxadiazole, 1,2,3,4-oxatriazole, 1,2,3,5-oxatriazole, 1,2,3-thiadiazole, 1,2,4-thiadiazole, 1,2,5-thiadiazole, 1,3,4-thiadiazole, 1,2,3,4-thiatriazole, 1,2,3,5-thiatriazole, and tetrazole, optionally substituted at one or more positions with alkyl, alkoxy, aryl, aryloxy, alkaryl, alkaryloxy, halogen, trihalomethyl, S(O)R, SO<sub>2</sub>NRR', SO<sub>3</sub>R, SR, NO<sub>2</sub>, NRR', OH, CN, C(O)R, OC(O)R, NHC(O)R, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R or CONRR'.



16. The crystalline form of claim 15, wherein said indolinone compound is 3-[(3-(2-carboxyethyl)-4-methylpyrrol-5-yl)methylene]-2-indolinone.

5 17. The crystalline form of claim 15, wherein said indolinone compound is 3-[4-(4-formylpiperazine-1-yl)benzylidenyl]-2-indolinone.

10 18. The crystalline form of claim 16, defined by the atomic structural coordinates of Table 3.

19. The crystalline form of claim 17, defined by the atomic structural coordinates of Table 4.

15 20. The crystalline form of claim 1, having monoclinic unit cells.

20 21. The crystalline form of claim 20, wherein said monoclinic unit cells have dimensions of about  $a=208.3$  Å,  $b=57.8$  Å,  $c=65.5$  Å and  $\beta=107.2^\circ$ .

22. The crystalline form of claim 20, wherein said monoclinic unit cells have dimensions of about  $a=211.6$  Å,  $b=51.3$  Å,  $c=66.1$  Å and  $\beta=107.7^\circ$ .

25 23. The crystalline form of claim 10, comprising one or more heavy metal atoms.

30 24. A polypeptide corresponding to the catalytic domain of a protein tyrosine kinase, containing at least about 20 amino acid residues upstream of the first

glycine in the conserved glycine-rich region of the catalytic domain, and at least about 17 amino acid residues downstream of the conserved arginine located at the C-terminal boundary of the catalytic domain.

5

25. The polypeptide of claim 24, wherein said protein tyrosine kinase is a receptor protein tyrosine kinase.

10

26. The polypeptide of claim 24, wherein said protein tyrosine kinase is a non-receptor protein tyrosine kinase.

15

27. The polypeptide of claim 25, wherein said receptor tyrosine kinase is selected from the group consisting of FGF-R, PDGF-R, KDR, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK.

20

28. The polypeptide of claim 26, wherein said non-receptor kinase is selected from the group consisting of SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK.

25

29. The polypeptide of claim 24 having the amino acid sequence shown in SEQ ID NO:4.

30. A method of using the polypeptide of claim 24 to form a crystal, comprising the steps of:

(a) mixing a volume of polypeptide solution with a reservoir solution; and

30

(b) incubating the mixture obtained in step (a) over the reservoir solution in a closed container,

under conditions suitable for crystallization.

31. A method of obtaining an FGF receptor tyrosine kinase domain polypeptide in crystalline form,  
5 comprising the steps of:

(a) mixing a volume of polypeptide solution with an equal volume of reservoir solution, wherein said polypeptide solution comprises 1 mg/mL to 60 mg/mL FGF-type tyrosine kinase domain protein, 10 mM to 200 mM  
10 buffering agent, 0 mM to 20 mM dithiothreitol and has a pH of about 5.5 to about 7.5, and wherein said reservoir solution comprises 10% to 30% (w/v) polyethylene glycol, 0.1 M to 0.5 M ammonium sulfate, 0% to 20% (w/v) ethylene glycol or glycerol, 10 mM to 200 mM buffering  
15 agent and has a pH of about 5.5 to about 7.5; and

(b) incubating the mixture obtained in step (a) over said reservoir solution in a closed container at a temperature between 0° and 25° °C until crystals  
20 form.

32. The method of claim 31, wherein said polypeptide solution comprises about 10 mg/mL FGF receptor tyrosine kinase domain, about 10 mM sodium chloride, about 2 mM dithiothreitol, about 10 mM Tris-HCl and has a pH of about 8; the reservoir buffer  
25 comprises about 16% (w/v) polyethylene glycol (MW 10000), about 0.3 M ammonium sulfate, about 5% ethylene glycol or glycerol, about 100 mM bis-Tris and has a pH of about 6.5; and the temperature is about 4°C.

33. The method of claim 31, wherein said

30

polypeptide solution comprises a compound.

34. A cDNA encoding an FGF receptor tyrosine kinase domain protein, wherein a coding strand of the cDNA has the nucleotide sequence of SEQ ID NO:5.

35. A method of determining three dimensional structures of protein tyrosine kinases with unknown structure comprising the step of applying structural atomic coordinates set forth in Table 1, Table 2, Table 3, or Table 4.

36. The method of claim 35, comprising the following steps:

(a) aligning a first computer representation of an amino acid sequence of a protein tyrosine kinase of unknown structure with a second computer representation of a protein tyrosine kinase of known structure by matching homologous regions of amino acid sequences of said first computer representation and said second computer representation;

(b) transferring computer representations of amino acid structures in said protein tyrosine kinase of known structure to computer representations of corresponding amino acid structures in said protein tyrosine kinase with unknown structure; and

(c) determining a low energy conformation of the protein tyrosine kinase structure resulting from step (b).

37. The method of claim 35, comprising the

following steps:

(a) aligning the positions of atoms in the unit cell by matching electron diffraction data from two crystals; and

5 (b) determining a low energy conformation of the resulting protein tyrosine kinase structure.

38. The method of claim 35, comprising the following steps:

10 (a) determining the secondary structure of a protein tyrosine kinase structure using NMR data; and

(b) simplifying the assignment of through-space interactions of amino acids.

15 39. The method of any one of claims 35, 36, 37, or 38, wherein said protein tyrosine kinase with or without known structure is a receptor protein tyrosine kinase.

20 40. The method of claim 39, wherein said receptor protein tyrosine kinase with or without known structure is selected from the group consisting of FGF-R, PDGF-R, FLK, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK.

25 41. The method of anyone of claims 35, 36, 37, or 38, wherein said protein tyrosine kinase with or without known structure is a non-receptor protein tyrosine kinase.

30 42. The method of claim 41, wherein said protein tyrosine kinase with or without known structure is

selected from the group consisting of SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK.

5           43. A method of identifying a potential modulator of protein tyrosine kinase function by docking a computer representation of a structure of a compound with a computer representation of a structure of a cavity formed by the active-site of a protein tyrosine kinase, wherein said structure of said protein tyrosine  
10 kinase is defined by atomic structural coordinates set forth in Table 1, Table 2, Table 3, or Table 4.

44. The method of claim 43, comprising the following steps:

15           (a) removing a computer representation of a compound complexed with a protein tyrosine kinase and docking a computer representation of a compound from a computer data base with a computer representation of the active-site of the protein tyrosine kinase;

20           (b) determining a conformation of the complex resulting from step (a) with a favorable geometric fit and favorable complementary interactions; and

25           (c) identifying compounds that best fit said active-site as potential modulators of protein tyrosine kinase function.

45. The method of claim 43, comprising the following steps:

30           (a) modifying a computer representation of compound complexed with a protein tyrosine kinase by the deletion of a chemical group or groups or by the

addition of a chemical group or groups;

(b) determining a conformation of the complex resulting from step (a) with a favorable geometric fit and favorable complementary interactions; and

5 (c) identifying compounds that best fit the protein tyrosine kinase active-site as potential modulators of protein tyrosine kinase function.

10 46. The method of claim 43, wherein said method comprises the following steps:

(a) removing a computer representation of a compound complexed with a protein tyrosine kinase; and

15 (b) searching a data base for data base compounds similar to said compounds using a compound searching computer program or replacing portions of said compound with similar chemical structures from a data base using a compound construction computer program.

20 47. The method of any one of claims 43, 44, 45, or 46, wherein said protein tyrosine kinase is a receptor protein tyrosine kinase.

25 48. The method of claim 47, wherein said receptor protein tyrosine kinase is selected from the group consisting of FGF-R, PDGF-R, FLK, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK.

30 49. The method of anyone of claims 43, 44, 45, or 46, wherein said protein tyrosine kinase is a non-receptor protein tyrosine kinase.

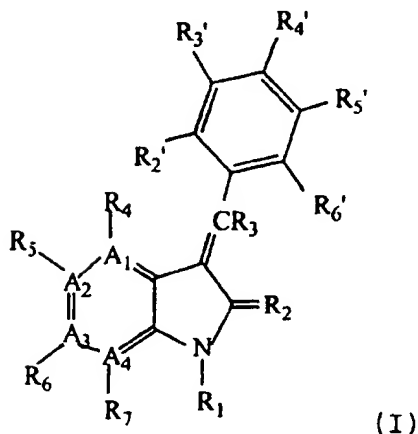
50. The method of claim 49, wherein said protein tyrosine kinase is selected from the group consisting of SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK.

5 51. a potential modulator of protein tyrosine kinase function identified by the method of any one of claims 43, 44, 45, or 46.

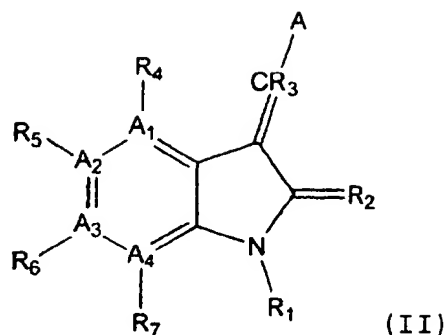
10 52. The potential modulator of claim 51, wherein said modulator is selected from a computer data base.

53. The potential modulator of claim 51, wherein said modulator is constructed from chemical groups selected from a computer data base.

15 54. The potential modulator of protein tyrosine kinase function of claim 51, wherein said modulator is an indolinone compound of formula I or II:







or a pharmaceutically acceptable salt, isomer, metabolite, ester, amide, or prodrug thereof, wherein

(a) A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub>, and A<sub>4</sub> are independently carbon or nitrogen;

(b) R<sub>1</sub> is hydrogen or alkyl;

(c) R<sub>2</sub> is oxygen in the case of an oxindolinone or sulfur in the case of a thiolindolinone;

(d) R<sub>3</sub> is hydrogen;

(e) R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are optionally present and are either (i) independently selected from the group consisting of hydrogen, alkyl, alkoxy, aryl, aryloxy, alkaryl, alkaryloxy, halogen, trihalomethyl, S(O)R, SO<sub>2</sub>NRR', SO<sub>3</sub>R, SR, NO<sub>2</sub>, NRR', OH, CN, C(O)R, OC(O)R, NHC(O)R, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R, and CONRR' or (ii) any two adjacent R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> taken together form a fused ring with the aryl portion of the oxindole-based portion of the indolinone;

(f) R<sub>2</sub>', R<sub>3</sub>', R<sub>4</sub>', R<sub>5</sub>', and R<sub>6</sub>' are each independently selected from the group consisting of hydrogen, alkyl, alkoxy, aryl, aryloxy, alkaryl, alkaryloxy, halogen, trihalomethyl, S(O)R, SO<sub>2</sub>NRR', SO<sub>3</sub>R,

SR, NO<sub>2</sub>, NRR', OH, CN, C(O)R, OC(O)R, NHC(O)R, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R, and CONRR';

(g) n is 0, 1, 2, or 3;

(h) R is hydrogen, alkyl or aryl;

5 (i) R' is hydrogen, alkyl or aryl; and

(j) A is a five membered heteroaryl ring selected from the group consisting of thiophene, pyrrole, pyrazole, imidazole, 1,2,3-triazole, 1,2,4-triazole, oxazole, isoxazole, thiazole, isothiazole, furan, 1,2,3-oxadiazole, 1,2,4-oxadiazole, 1,2,5-oxadiazole, 1,3,4-oxadiazole, 1,2,3,4-oxatriazole, 1,2,3,5-oxatriazole, 1,2,3-thiadiazole, 1,2,4-thiadiazole, 1,2,5-thiadiazole, 1,3,4-thiadiazole, 1,2,3,4-thiatriazole, 1,2,3,5-thiatriazole, and tetrazole, optionally substituted at one or more positions with alkyl, alkoxy, aryl, aryloxy, alkaryl, alkaryloxy, halogen, trihalomethyl, S(O)R, SO<sub>2</sub>NRR', SO<sub>3</sub>R, SR, NO<sub>2</sub>, NRR', OH, CN, C(O)R, OC(O)R, NHC(O)R, (CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>R or CONRR'.

20 55. A method of identifying a potential modulator of protein tyrosine kinase function as a modulator of protein tyrosine kinase function, comprising the following steps:

25 (a) administering said potential modulator to cells;

(b) comparing the level of protein tyrosine kinase phosphorylation between cells not administered the potential modulator and cells administered said potential modulator; and

30 (c) identifying said potential modulator as a modulator of protein tyrosine kinase function based on

the difference in the level of protein tyrosine kinase phosphorylation.

56. A method of identifying a potential modulator of protein tyrosine kinase function as a modulator of protein tyrosine kinase function, wherein said method comprises the following steps:

- (a) administering a preparation of said potential modulator to cells;
- (b) comparing the rate of cell growth between cells not administered the modulator and cells administered the modulator; and
- (c) identifying said potential modulator as a modulator of protein tyrosine kinase function based on the difference in the rate of cell growth.

57. A method of treating a disease associated with a protein tyrosine kinase with inappropriate activity in a cellular organism, wherein said method comprises the steps of:

- (a) administering a modulator of protein tyrosine kinase function to the organism, wherein said modulator is in an acceptable pharmaceutical preparation; and
- (b) activating or inhibiting the protein tyrosine kinase function to treat the disease.

58. The method of any one of claims 55, 56, or 57, wherein said protein tyrosine kinase is a receptor protein tyrosine kinase.

59. The method of claim 58, wherein said receptor protein tyrosine kinase is selected from the group containing FGF-R, PDGF-R, FLK, CCK4, MET, TRKA, AXL, TIE, EPH, RYK, DDR, ROS, RET, LTK, ROR1, and MUSK.

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60. The method of any one of claims 55, 56, or 57, wherein said protein tyrosine kinase is a non-receptor protein tyrosine kinase.

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61. The method of claim 60, wherein said non-receptor protein tyrosine kinase is selected from a group consisting of SRC, BRK, BTK, CSK, ABL, ZAP70, FES, FAK, JAK, and ACK.

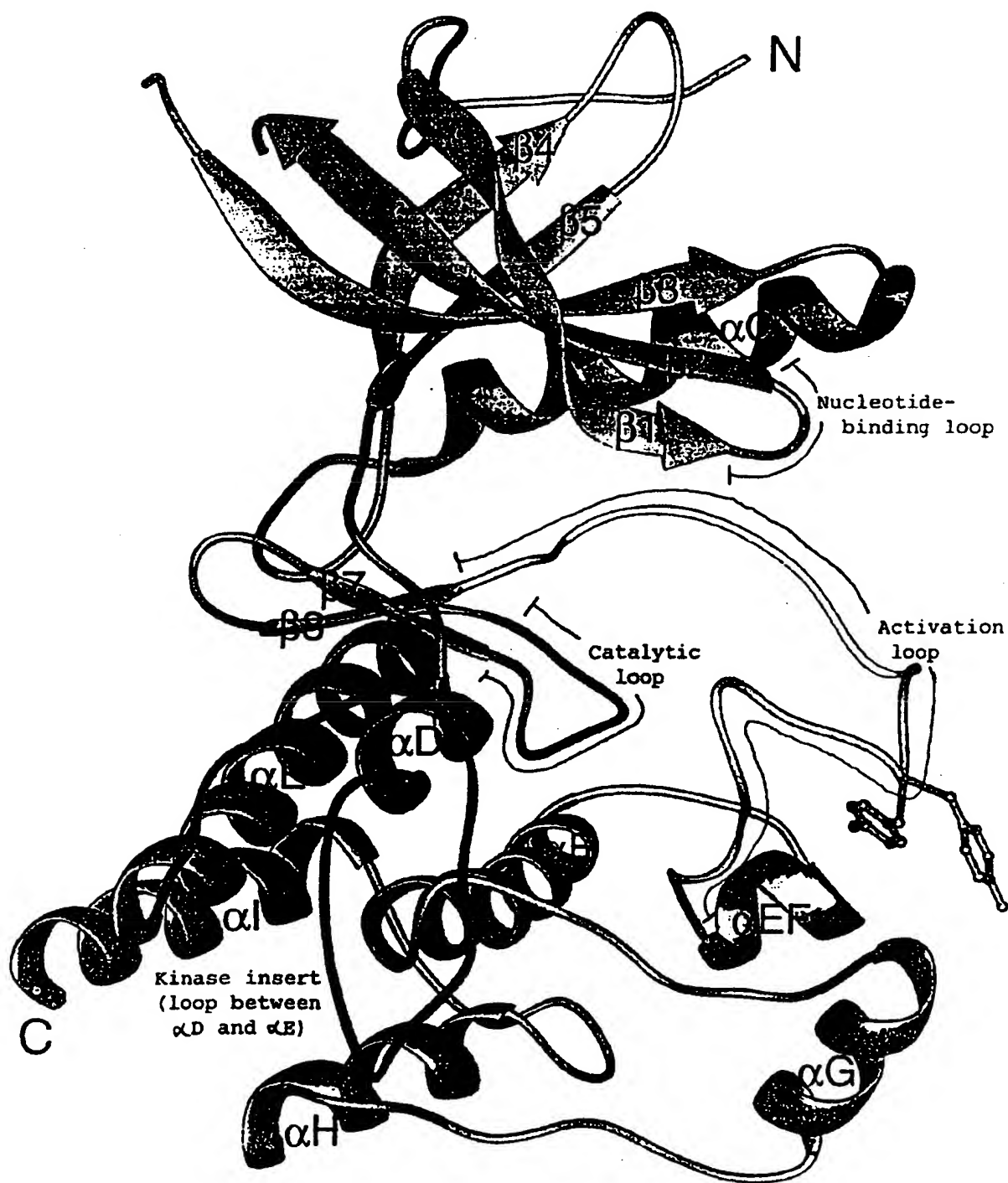


FIGURE 1

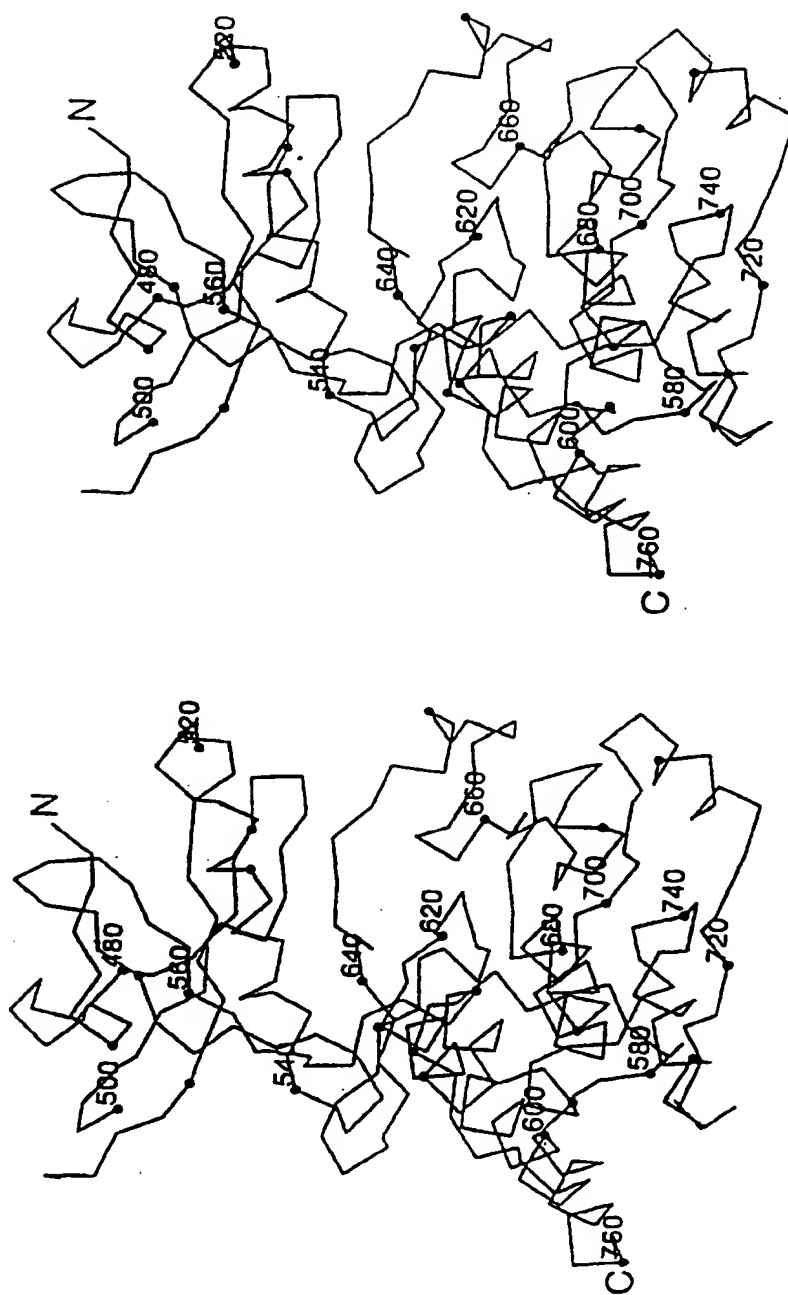


FIGURE 2

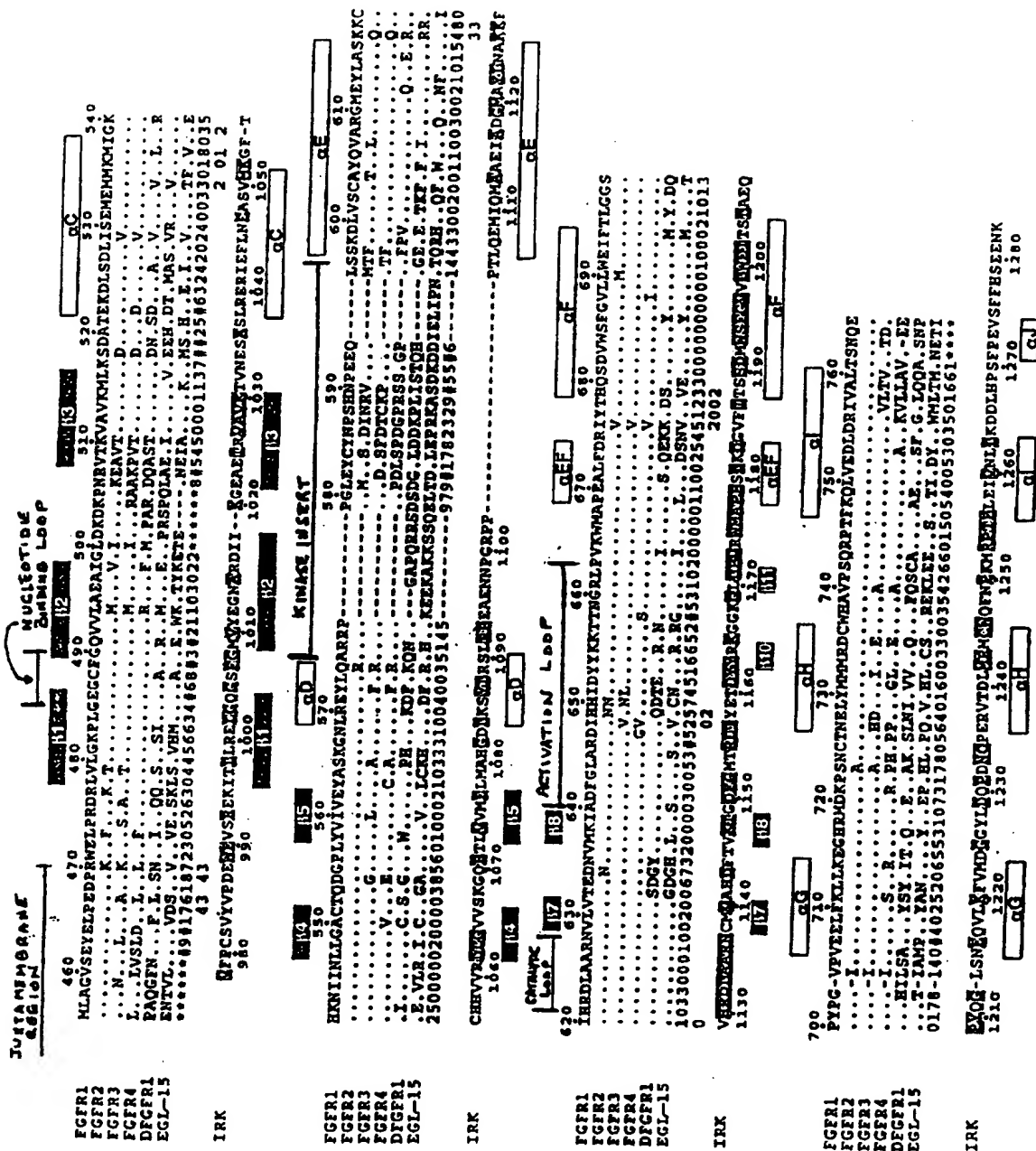


FIGURE 4A

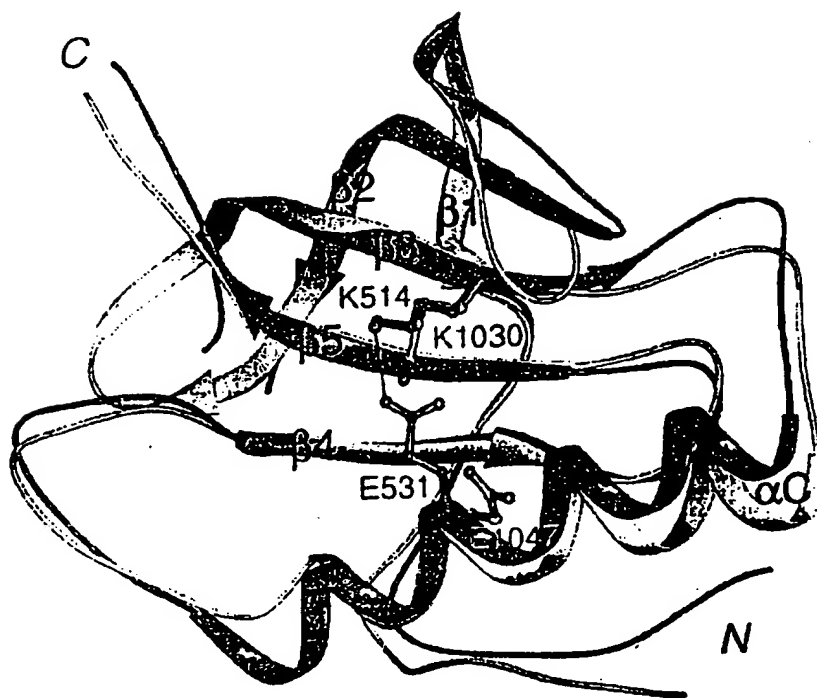
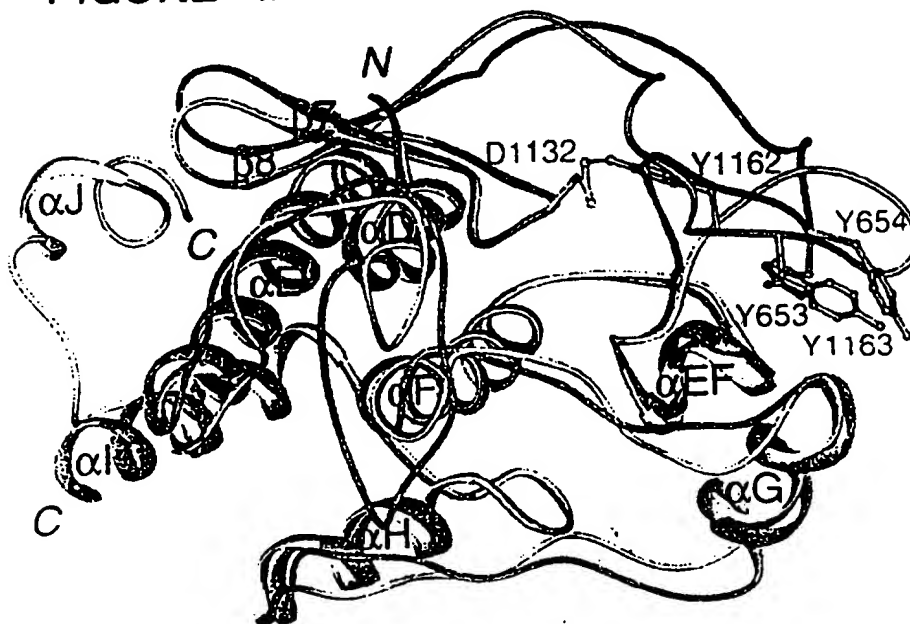


FIGURE 4B





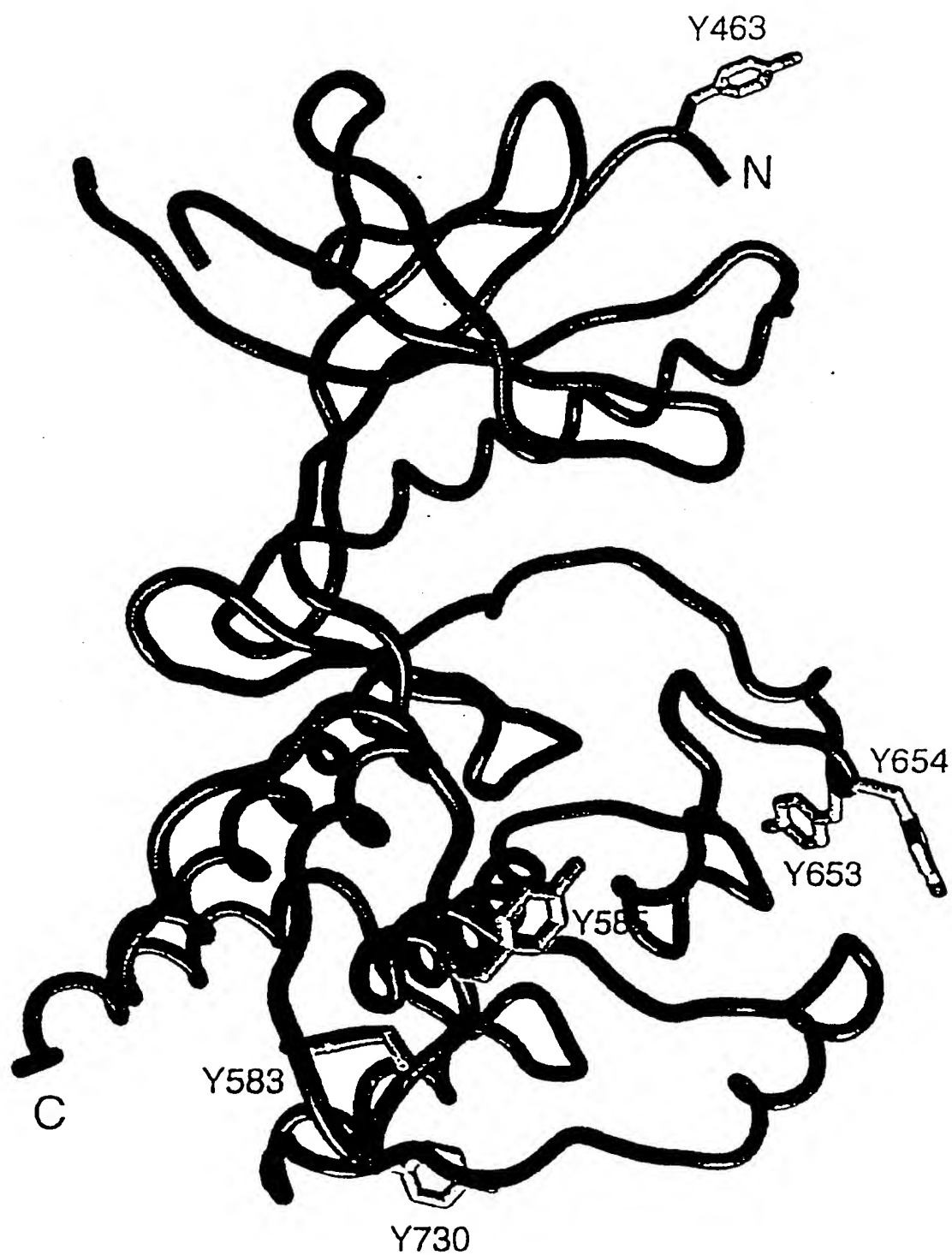


FIGURE 5

# GLYCINE RICH

|                  |                    |            |            |            |          |               |            |            |           |             |             |
|------------------|--------------------|------------|------------|------------|----------|---------------|------------|------------|-----------|-------------|-------------|
| 466              | FGFR <sub>1</sub>  | LP-ED-PRV  | E--LPRDRLY | LCKPL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | EGFR <sub>1</sub>  | PNQALLRLK  | E--LPRDRLY | LCKPL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | INSR <sub>1</sub>  | VYVPOE--V  | E--VSREKIT | LLRELD     | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | PDGFR <sub>1</sub> | LP-YD-SRV  | E--FPRDGLV | LCKPL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | KOR <sub>1</sub>   | -P-YDASKV  | E--FPRDGLV | LCKPL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | CKR <sub>1</sub>   | HSYSD--KH  | H--FPRSSLO | PITTL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | RET <sub>1</sub>   | AVOHVVGPS  | SLI-----   | VH FNEVIG  | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | TRKA <sub>1</sub>  | FSOACVHHK  | -----RRD   | IV LKVEL   | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | AXL <sub>1</sub>   | --KEKL--R  | OYVORIKVA  | LCKTL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | TIE <sub>1</sub>   | -P-EPL--S  | YVLEWEDIT  | FEDLI      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | EPH <sub>1</sub>   | WSNFP--R   | E--LDPAMLN | VDTIV      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | RYK <sub>1</sub>   | --KGV--K   | DIAISREKIT | LKQVL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | DDR <sub>1</sub>   | GGP-P-PRV  | D--FPRSLR  | FREKL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | ROS <sub>1</sub>   | E--EIE--N  | LPAPREKIT  | LRLLL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | RET <sub>1</sub>   | IL-ED-PKV  | E--FPRKMLV | LCKTL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | LYK <sub>1</sub>   | -P-LP-PCVT | E--VSPANVT | LRLAL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | ROR <sub>1</sub>   | KPKSKA--K  | E--LPLSAVR | FREKL      | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
|                  | MUSK <sub>1</sub>  | NPKLLS--L  | E--YPRNIE  | YVRO       | GGVLAETG | LOK-DK        | -----PHRY  | TKYATILKS  | -OATEKDL  | SO          | LISEHMKH    |
| KINASE INSERT    |                    |            |            |            |          |               |            |            |           |             |             |
| 538              | FGFR <sub>1</sub>  | IGKKNHIML  | LGACTOD-CP | L-----     | YVIV     | ETAKGNLRE     | YLO-ARRPP  | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | EGFR <sub>1</sub>  | VDM-PHVCRL | LGICLTS-TV | Q-----     | LI-T     | OLNPFGLD      | YVR-ENK-DH | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | INSR <sub>1</sub>  | FTC-MHVRL  | LGVSKE-CP  | T-----     | LVVH     | ELHAGDLKS     | YLR-SLRP   | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | PDGFR <sub>1</sub> | LGPHLNIYML | LGACTKS-CP | I-----     | YIIT     | EYCFYGLVH     | YLR-KNR-DS | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | KOR <sub>1</sub>   | IGHMLNVMYL | LGACTKPGCP | L-----     | HVIV     | EYCFYGLVH     | YLR-KNR-DS | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | CKR <sub>1</sub>   | LMM-ANVRL  | LGICREA-EP | M-----     | YHVL     | EYVGLGOLN     | FLR-SKDE   | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | RET <sub>1</sub>   | FSH-PNVLSL | LGICLNS-ES | L-----     | SPVVL    | PYKNGDLN      | FLR-NE     | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | TRKA <sub>1</sub>  | LQW-QHIVRF | PEYTCG-RP  | L-----     | LHVP     | EYHNGDLN      | FLR-SHCPDA | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | AXL <sub>1</sub>   | FDM-PNVNRL | IGVCFQSER  | ESPPAPYVIL | PFKNGDLN | FLR-SHCPDA    | LEYCYNPSH  | -----      | NP--E     | -EGL--SSKOL |             |
|                  | TIE <sub>1</sub>   | LGHFPIIML  | LGACKNR-GY | L-----     | YIAT     | EYAPYGLNLO    | FLR-KSVYLE | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | EPH <sub>1</sub>   | FSH-PHILML | EGVTKR-KP  | I-----     | NIIT     | EFHENGALOA    | FLR-ERE-DO | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | RYK <sub>1</sub>   | LHM-RNLPI  | THVCIE-GE  | -----      | KPVIL    | PYHNGDLN      | FLR-ERE-DO | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | DDR <sub>1</sub>   | LKO-PNIRL  | LGVCYD-OP  | L-----     | CHIT     | DTYHNGDLN     | FLR-ERE-DO | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | ROS <sub>1</sub>   | FNM-PHILKO | LGVCYD-OP  | L-----     | YIIL     | ELHNGDLN      | FLR-KARH-A | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | RET <sub>1</sub>   | VNM-PHIVL  | YGACSD-CP  | L-----     | LLIV     | EYAKYGLNLO    | FLR-ERE-DO | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | LYK <sub>1</sub>   | FRM-QNIVRC | LGVCYD-OP  | L-----     | LLIV     | ELHNGDLN      | FLR-KARH-A | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | ROR <sub>1</sub>   | LHM-PHIVL  | LGVCYD-OP  | L-----     | CHIT     | DTYHNGDLN     | FLR-ERE-DO | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
|                  | MUSK <sub>1</sub>  | FDM-PNIVL  | LGVCYD-OP  | L-----     | CHIT     | DTYHNGDLN     | FLR-ERE-DO | LEYCYNPSH  | -----     | NP--E       | -EGL--SSKOL |
| CATALYTIC LOOP Y |                    |            |            |            |          |               |            |            |           |             |             |
| 601              | FGFR <sub>1</sub>  | VSCAYGVARC | MEYLASKKCI | -----      | LAAR     | VL VTEO-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | EGFR <sub>1</sub>  | LWCVQIAK   | MYLDEDRRL  | -----      | LAAR     | VL VKTP-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | INSR <sub>1</sub>  | IQHAAIAAG  | HATLNAKKFV | -----      | LAAR     | VL VAND-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | PDGFR <sub>1</sub> | LSFTYGVARG | MEFLASKNCV | -----      | LAAR     | VL LAOG-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | KOR <sub>1</sub>   | ICYSFYVARG | MEFLASKNCV | -----      | LAAR     | VL LSEK-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | CKR <sub>1</sub>   | VALCTQVAG  | MEFLASKNCV | -----      | LAAR     | VL VSAO-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | RET <sub>1</sub>   | IGFGLQVAK  | MEFLASKNCV | -----      | LAAR     | VL LOEK-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | TRKA <sub>1</sub>  | LAVASQVAG  | MYLASKKCI  | -----      | LAAR     | VL VGOO-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | AXL <sub>1</sub>   | VKFMADIASG | MYLASKKCI  | -----      | LAAR     | VL LHEN-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | TIE <sub>1</sub>   | LRFASQVAG  | NOYLSEKOFI | -----      | LAAR     | VL VGEN-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | EPH <sub>1</sub>   | VAFLOQIASG | MYLASKKCI  | -----      | LAAR     | VL VNON-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | RYK <sub>1</sub>   | VHMAIQIACC | MYLASKKCI  | -----      | LAAR     | VL IODT-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | DDR <sub>1</sub>   | LHVAQIASG  | MYLASKKCI  | -----      | LAAR     | VL VGEN-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | ROS <sub>1</sub>   | VDLQVQISG  | CYLERHMFJ  | -----      | LAAR     | VL VSKDYTSR   | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | RET <sub>1</sub>   | ISFAMQISG  | NOYLASKKCI | -----      | LAAR     | VL VAEC-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | LYK <sub>1</sub>   | LQLAGQIAG  | CHYLEEMFI  | -----      | LAAR     | VL LSCAGPS--R | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | ROR <sub>1</sub>   | LHIAIQIAG  | MEYLASKKCI | -----      | LAAR     | VL ICEO-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
|                  | MUSK <sub>1</sub>  | LHIAQVAG   | MYLASKKCI  | -----      | LAAR     | VL VCEY-----  | N VKIADFLA | ROIMHIDYK  | K--TTNGLP | VKMAE       | FLF         |
| ACTIVATION LOOP  |                    |            |            |            |          |               |            |            |           |             |             |
| 684              | FGFR <sub>1</sub>  | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | EGFR <sub>1</sub>  | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | INSR <sub>1</sub>  | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | PDGFR <sub>1</sub> | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | KOR <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | CKR <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | RET <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | TRKA <sub>1</sub>  | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | AXL <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | EPH <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | RYK <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | DDR <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | ROS <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | RET <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | LYK <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | ROR <sub>1</sub>   | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |
|                  | MUSK <sub>1</sub>  | WSFGV-LLVE | IFTLGG-SPY | P-GVPVEE-- | -----    | LF-KLL        | KECHRMOKPS | NCTNELYNNH | ROCHAVPSO | RPTFKOLVED  | LORIVALTSH  |

FIGURE 6A

465  
 FGFR1\_h LPEOPRWELP RORLVLGK-P LEEFFDQV LAEALGLOKD KPNRYTKVAY KILKSDATEK DLSOLISEM MMKMI-GKHK  
 SRC\_h GLAKDAWEIP RESLRLEV-K LEEFFFEVW MGTW----- NGT--TRVAI KILKPGTHSP -E--AFLO- AOVMKKLRHE  
 BRK\_h LPHWDDWERP REEFTLCR-K LEEFFFEVF EGLW----- KOR--VQVAI KVISRONLLH -O--QMLQS IOAMKKLRHK  
 BTK\_h CLCYGSWEIO PKOLTFLK-E LEEFFFEVVK YGKW----- RGQYD--VAI KNIKEGSHSE -O--EFIE- AKVMMNLSHE  
 CSK\_h EFYRSCWALH MKELKLLQ-T LEEFFFEVVK LGQY----- RGN--KVAV KLIKNDATA -O--AFL-A ASVMTQLRHS  
 ABL\_h SPNYOKWEHE RTDITHKH-K LEEFFFEVVK EGVW----- K-KYSLTVAV KTLKEDTHEV -E--EFLK- AAVMKEIKHP  
 ZAP70\_h LKOKKLF-LK RDNLLIADIE LEEFFFEVVR GGYY-----RM RKKO-IDVAI KVLKQG--TE KAOTEENHRE AQIMHQLONP  
 FES\_h AVPKDKVVLN HEDLVLGE-Q LEEFFFEVVF SCR----- LRDNTLVAV KSCRETLPPD LKAK-FLQ- ARILKOYSHP  
 FAK\_h MPSTROYEIQ RERIELCRC- LEEFFFEVVF OGII-----MS PENPALAVAI KICKNC--TS OSVREKFLQ ALTHROFOHP  
 JAK1\_h PTEVOPHFE KRFLKRIR-O LEEFFFEVVE LCRY-----DP EDNTGEQVAV KBLKPE--SG GNHIAOLKKE IEILRNLYHE  
 ACK\_h PLOSLTCLIG EKDLRLLE-K LEEFFFEVVR RGEV-----DA PSCKTYSVAV KILKPDVLSO PEAMDOFIRE VNAMEHSLDHR

543  
 FGFR1\_h NIINLLGACT -DQCP-LYVI VEYASKGNLR EYLOARRPPG LEYCYNPSHN PEEQLSSKDL VSCAYQVARG MEYLASKKCI  
 SRC\_h KLVQLYAVVS -E-EP-IYIV TEYHAKGSL DFLKGET----- -GKYLRLPOL VDMAAQIASG MAYVERHNYV  
 BRK\_h HILALYAVVS VG-OP-VYII TELHAKGSL ELLRDSO----- -EKYLPVSEL LDIAVOVAEG MCYLESQNYI  
 BTK\_h KLVQLYCVCT KQR-P-IFI TEYHANGCLL NYLRE-M----- -RHRFOTQDL LENCQDVCEA MEYLESQGLF  
 CSK\_h NLVOLLGVIV EEKGG-LYIV TEYHAKGSLV OYLSRG----- -RSVLGGDCL LKFSLDVCEA MEYLEGNFV  
 ABL\_h NLVOLLGVCT REP-P-FYII TEFTYGNLL OYLRECN----- -RQEVNAVVL LYNATQISSA MEYLEKKNFI  
 ZAP70\_h YIVRLIGVCO AEA---LMLV MEMACGCPH KFLVGK----- -REEIPVSNV AELLHOVSMG NKYLEKNFV  
 FES\_h NIVRLIGVCT -QKOP-IYIV HELVQGGDFL TFLRTE----- -GARLRVKT LQHVGDAAAG MEYLESKCCI  
 FAK\_h HIKVLIGVIT ENP---VWII HELCTLGELR SFLQVR----- -KYSLOLASL ILYAYOLSTA LAYLESKRFV  
 JAK1\_h NIVKYKGICT EDGNGTKLI NEFLPSGSLK EYLPKN----- -KNKINLQDL LKYAVOICKG MDYLGSRQYV  
 ACK\_h NLIRLYGVVL TPP---MKHV TELAPLGSL DRLRKH----- -OGHFLGLTL SRYAVOVAEG MGYLESKRFI

621  
 FGFR1\_h HRDLAARVL VTEDNVMKIA DFGARLIDH HIDYKKTIN CRLPVKWMAF EAL-FORIYT HOSDVSFGV LLWEIFTLGG  
 SRC\_h HRDLAARVL VGENLVCKVA DFGARLIE DNEYTARQGA -KFPKWTAP EALYGR-FT IKSDVSFGI LLTELTTKGR  
 BRK\_h HRDLAARVL VGENTLCKVG DFGARLIK EDVLSHD-H -NIPYKWTAP EALSRGH-YS TKSDVSFGI LLHEHFSRGO  
 BTK\_h HRDLAARVL VNDQGVVKYS DFGSRYVL DDEYTSVGS -KFPVRWSPP EVLHYSK-FS SKSDVSFGV LMWEIYSLGK  
 CSK\_h HRDLAARVL VSEDNVAKVS DFGTK---- -EASSTQDTG -KLPVKWTAP EALREKK-FS TKSDVSFGI LLWEIYSFGR  
 ABL\_h HRDLAARVL VGENHLVKVA DFGSRLMT GOTYTAHAGA -KFPKWTAP ESLAYNK-FS IKSDVSFGV LLWEIATYGH  
 ZAP70\_h HRDLAARVL LVNRHYAKIS DFGSKALGA ODSYTTARSA CKVPLKWYAP EINFRRK-FS SRSDVSFGC THWEALSYGO  
 FES\_h HRDLAARVL VTEKNVLKIS DFGSREEA DGYYAASGGS RQVPVKWTAP EALNYGR-YS SESDVSFGI LLVETFSLGA  
 FAK\_h HRDLAARVL VSSNDCKVLG DFGSRYME DSTYYKA-SK GKLPKWTAP EINFRR-FT SASDVSFGV CHWEILMHGV  
 JAK1\_h HRDLAARVL YESEMVKIG DFGTKAIEY OKEYTYVKDD RQSPVFWYAP ECLHOSK-FY IASDVSFGV TLHELLTYGO  
 ACK\_h HRDLAARVL LATROLVKIG DFGHRLPQ NODHYVNOEH RKVPFAWCAP EBLXTRT-FS HASDVSFGV TLWENFTYGO

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 FGFR1\_h S----- PYPGYP VEELFKLLKE -GHRMDKPSN CTNELYMMHR OCHAVPSOR PTFKQLVEOL DRIVALTSNQ  
 SRC\_h V----- PYPCHV NREVLQOVR -GYRNPCCPE CPESLHOLMC OCHKEPEER PTFEYLQAFI EOYFTSTEPQ  
 BRK\_h V----- PYPCHS NHEAFLRYDA -GYRNPCCPE CPPSVHKLML TOCHROPEOR PCFKALRERL SSFTSYENPT  
 BTK\_h M----- PYERFT NSETAEHIAQ -GLRLYRPHL ASEKYTTINY SCHEKADER PTFKILLSNI LOVHDEES--  
 CSK\_h V----- PYPRIP LKDVVPRVEK -GYKMDAPDG CPPAVYEMK NCMLDAANR PSFLQLREOL EHIKTHLHL  
 ABL\_h S----- PYPGID LSOVYELLEK -OYRHERPEG CPEKYYELMR ACMDMNPOR PSFAEIHQAF ETMFOESSIS  
 ZAP70\_h K----- PYKKNK GPEVMAFIE -OGKRMECPPE CPPELYALMS DCMYKVEOR POFLTVEORH RACYSLASK  
 FES\_h S----- PYPNLS NQOTREFVEK -GGRLPCPEL CPDAVRLME OCHAYEPCOR PSFSTIYQEL QSIR--KRHR  
 FAK\_h K----- PFQGVK NNDVIGRIE -NGERLPCPPN CPPTLYSLNT KCMYDPSRR PRFTELKQAL STILEEEKAO  
 JAK1\_h SOSSPMALFL KNIGPTHGOM TVTRLVNTLK EGKRLPCPPN CPDEVYQLMR KCMYDPSNR TSFONLIEGF -----EALLK  
 ACK\_h E----- PWIGLN GSDILHKIOL EGERLPRPEO CPQDIYNMNV OCHANKPEOR PTFVALROFL LEAOPTOMRA

FIGURE 6B